Winter 1993/94
Volume 67 Number 3

# Harvard Medical
## ALUMNI BULLETIN

**The art of aging is epitomized by Pablo Picasso (1881-1973), whose versatility and creativity continued right up until his death at age 91. Pictured on the cover is his *Young Girl Seated*, completed in 1970 when he was 88 years old.**

# Inside HMAB

It is a time of life that the late Joe Garland '19 aptly referred to as "the shortened step." In this issue we look at that irrepressible phenomenon of growing older—its art and a bit of its science.

We start with an account by T. Franklin Williams '50, former director of the National Institute on Aging, who highlights some of the information that's gathering on the retirement years, which now seem to be lived with many more productive options. Retirement can no longer be mandated by age, with repercussions at HMS you can read about in a sidebar article. This is followed by Joe Garland's "The Shortened Step," the last chapter of his autobiography *A Time for Remembering*.

Doris Bennett '49 then reveals what she hates about growing older, although she acknowledges there are some positives to be enjoyed. Jeanne Wei, MD, director of the HMS Division on Aging, highlights some of the research and knowledge on the medical problems women experience when aging, which we accompany with a side story on how geriatrics is taught at HMS.

In an excerpt from her new book, *The Fountain of Age*, Betty Friedan argues that artistic and scientific creativity does not uniformly peak in youth. We illustrate this on the cover with a late-life Picasso painting and with photos throughout the issue of well-known people who performed or are performing creatively in their later years.

John Stanbury '39 describes his disquieting visits to a nursing home and ponders what can be done to ensure a more compassionate life there. Robert Goldwyn '56 amusingly lists some signs of growing older. And we sprinkle throughout the issue several profiles of what alumni are doing with their retirement years.

Outside this theme, we excerpt scenes from a play about the founding of Alcoholics Anonymous called "Bill W. and Dr. Bob" by Stephen Bergman '73 (whose pen name is Sam Shem) and Janet Surrey, PhD. The HMS Division on Addictions collaborated with the authors on locally staging the play, one of the division's many educational efforts on addiction problems.

We close with a remembrance by Jonathan Cohen, MD of two HMS late, great pathologists: Burt Wolbach '03 and Sidney Farber '27.

*Ellen Barlow*

Harvard Medical
ALUMNI BULLETIN



The *Harvard Medical Alumni Bulletin* is published quarterly at 25 Shattuck Street, Boston, MA 02115

Telephone: (617) 432-1548. Third class postage paid at Burlington, Vermont. Postmaster, send form 3579 to 25 Shattuck Street, Boston, MA 02115, ISSN 0191-7757. Printed in the U.S.A.

# Letters

**My Dinner With...**

For years, I have been meaning to write you and tell you how superior the *Alumni Bulletin* is. The photo of Henry Allen, looking like a Bill Mauldin "grunt," and of Allan Friedlich was wondrous (Autumn 1993).

But what really interested me was the article "My Dinner with Saint-Exupéry." In my teens, I read *Night Flight* with little expectation that I too would become an intrepid pilot. Saint-Exupéry was an acquaintance of my commanding officer, the head of our photo-reconnaissance squadron, and was lost on a reconnaissance mission in a P-38 Lightning.

It reminded me of my experience dining at the White House with FDR, Eleanor and a host of luminaries of those days. (I sat between Harry Hopkins and George Marshall!) Present at that state dinner way back in 1943 were Ambassadors Winant and Eden, Admirals King and Leahy, Field Marshall Sir John Dill, Sumner Wells and little pilot officer Keller with the lowest rank in the Royal Canadian Air Force!

Might the *Alumni Bulletin* have a regular series of "My Dinner with ——"? The result of my hob-nobbing with these impressive leaders was that, on my return to my squadron in Egypt, my CO felt that I was in some way related to royalty and granted me my every wish for as long as I was with his squadron.

As you know, we few, we happy few, we band of brothers, love nothing better than to talk or write of our past!

*John Keller '49*

**Poetic Justice**

Although I read your magazine
With never-lessening awe,
In glancing at Achilles's heel,
I find a tiny flaw.

On Page 14, there is a word
Which would defy description,
Were it not devilish accurate
To signify "conniption"!

This word, 'maltriculation'
Fits well the debtor's state.
How can he ride to solvency
With all this on his plate?

I leave the world of high finance
To Morgans & Baruchs
And merely dance along the edge
With trivial rebukes.

*Jane Bragdon*
(widow of Edward Hamlin '33, a former editor of the *Bulletin*)

*Editor's response:*
*Thank you kindly for the care*
*with which you scan our pages.*
*Your keen attention to detail*
*reminds us we're not sages.*
*[Re: Autumn '93 issue]*

**Health and Politics**

I enjoyed your "Presidential Health—Press and Politics" in the Summer 1993 issue. It was very well done.

I am sure the members of that panel, all of whom did a good job, are aware of a recent book published this year by the Yale University Press: *When Illness Strikes the Leader: The Dilemma of the Captive King* by Jerrold M. Post and Robert S. Robins. This has a wealth of material plus a lot of good judgmental discussion of the whole thing by the authors.

*Eben Alexander Jr. '39*

**HIV and Doctors**

It's a pleasure to see the articulate writing in David Bell's CDC diary on the testing of doctors for HIV and in Terri Rutter's discussion of the risk of HIV-positive doctors to their patients (Summer 1993). Current law in Colorado prohibits testing a patient for HIV without the patient's written permission. If a physician tests without permission the patient can sue the physician. One Denver hospital has a four-page consent form full of waivers for a patient to sign before an HIV test. A positive test must be reported to the Department of Health, but the patient may refuse counseling and refuse to name contacts. A legislator who voted for the bill told me he was under the impression that about 12 percent of his constituents were homosexual.

There is no Colorado law preventing physicians from testing a patient for any other sexually transmitted disease, or for tuberculosis. For those diseases the law requires treatment until a patient is no longer infectious, and the naming and tracing of contacts. This means theoretically that a patient can be tested and treated for tuberculosis but not for possible underlying HIV. A Denver internist commented that the Colorado legislature had abandoned every principle of public health to give civil rights to a lethal virus. The Colorado law does ensure confidentiality and counseling for patients, largely through the advice and efforts of Thomas Vernon '63 when he was director of the Colorado Department of Public Health.

It seems to me that surgeons, nurses and laboratory technologists have an equal right with patients to know when they are at risk of HIV infection. Before we send HIV-positive doctors to jail for continuing to practice, before forcing tests on any health-care professional, we might

# Letters

arrange compulsory testing for all people of the oldest profession and for all known illicit drug users. For them and their clients, HIV is a direct occupational hazard. Dr. Joyce Wallace tests and counsels prostitutes in New York. In court one woman told a judge it was the first time anyone had treated her like a human being.

*Thomas H. Coleman '44*

The Summer 1993 issue of the *Bulletin* carried an interesting article by David Bell about his adventures in addressing, at CDC, the issues raised by possible HIV transmission from surgeons or dentists to patients. Terri Rutter's sidebar includes information about MERP, the program I founded to help HIV-infected physicians. I'm writing to report a socially interesting side effect of the development of MERP, which is sponsored by the American Association of Physicians for Human Rights—an international organization concerned with the health care of gay men and lesbians.

In the fall of 1990, I began to work with the AMA to seek a collaboration in helping HIV-infected physicians. Our collegial interaction has ripened in many ways but often with the perception, on our part, that we were seen as less than full professional colleagues because of who we are. In December 1992 the AMA House of Delegates for the fourth time in about as many years voted overwhelmingly to deny adding "sexual orientation" to a list of its by-laws of characteristics that would not be the basis of discrimination.

It seemed to me, I believe not irrationally, that the delegates were stating clearly as AMA policy that they wished to retain the right to discriminate against gay and lesbian physicians. The official AMA response, however, was that they had never discriminated against anyone but did not wish to clutter their by-laws.

I successfully invited the chairman of the AMA Board of Trustees and the president of the AMA's Physicians Health Foundation to an AAPHR/MERP board meeting to give us a chance to discuss how differently we perceived AMA policy. Subsequently the AMA Board of Trustees originated a board recommendation to the House of Delegates to add "sexual orientation" to the protected list in the AMA by-laws and this was, in fact, passed by an overwhelming vote in June 1993.

An important component of the lobbying campaign was the spontaneously generated support of some 200 Harvard medical students who produced a petition at the right moment and achieved a good deal of media coverage.

The AMA has taken an important symbolic step toward developing authentic collegiality in our profession and an atmosphere of mutual respect, but there are many physicians who openly affirm their deep disrespect for gay and lesbian colleagues. I should like to acknowledge the powerful and selfless support of Harvard medical students and to note that the AMA's action, in part, was derived from our work to salvage the professional lives of HIV-infected physicians.

*Alvin Novick '51*

**Janeway's Blood**

The article on Charles A. Janeway (Winter 1992/93) reminded me of his work in a Peter Bent Brigham research lab with J.T. Heyl on an albumen substitute for blood loss. On October 12, 1941, they asked for volunteers, since it was a "free day" to celebrate Columbus Day. I signed up and my role was to be the one with major blood loss (850 cc). We were kept overnight in a ward, which was no problem for me. The scuttlebutt in Vanderbilt dining hall, however, was that the recipients who got the albumen substitute became sensitized to beef. We never heard the actual outcome, but when Pearl Harbor and the Cocoanut Grove fire happened, no albumen was used.

*Wallace Miller '44*

# Pulse

**More Health from Harvard**

The Harvard Health Publications Group—publishers of the *Harvard Health Letter*, the *Mental Health Letter* and the *Heart Letter*—has introduced its newest addition: *Women's Health Watch*, which debuted in September 1993.

"We are trying to give women an idea of their entire range of options around issues of health care," says editor Beverly Merz, who previously was at JAMA, where she was associate editor. Celeste Robb-Nicholson, MD is the editor-in-chief of the newsletter.

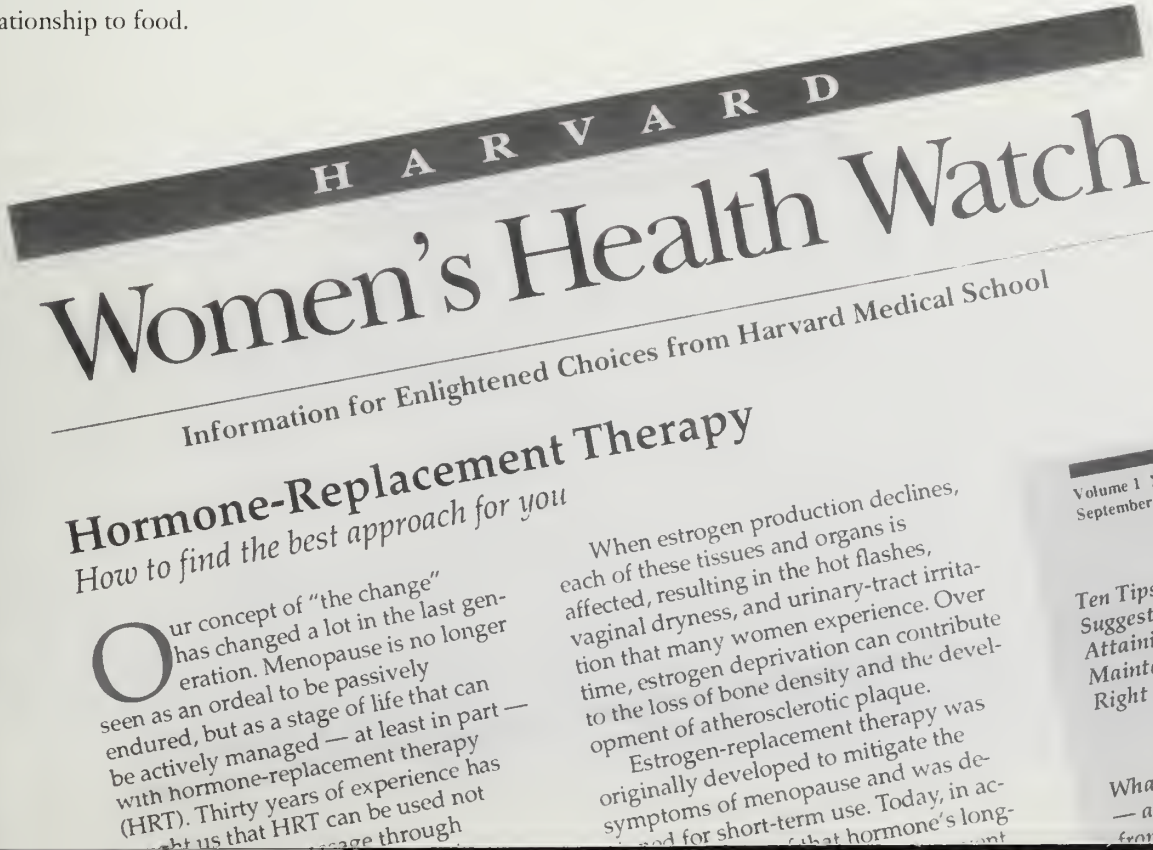
Currently targeting women in their 40s and older (although Merz says they would like to eventually expand into areas that concern younger women), the first issues contained articles on hormone-replacement therapy, ovarian cancer, osteoporosis and updates on the risk and treatment of breast cancer. Future issues will examine psychological issues, such as the long-term effects of antidepressants, and, says Merz, "things that separate women from men," such as women's relationship to food.

Merz says the newsletter's focus is on trying to give women the kind of information they need to establish good relationships with their doctors. "I act as the naive patient asking all the questions" says Merz. Robb-Nicholson and a physician advisory board (of whom the majority are women) provide the answers. "We're able to give more advice this way. We don't have to be impartially journalistic."

Response to the new publication has been overwhelming, with already approximately 11,000 subscribers. Most of these readers, says Merz, are "avid info-seekers" who read several health-related publications; but the newcomer is also encouraged. "We're trying to push the idea of being an efficient patient, one who is willing to do more of her own work," says Merz.

photo by Jim Bourg

**William V. McDermott Jr. '42 (Harvard College '38) was awarded the Harvard Alumni Association Award in October 1993. The award recognizes outstanding services to the university through alumni activities. McDermott recently retired as the HMS director of alumni relations and continues as the medical school's representative to the Harvard Alumni Association.**


HARVARD

Women's Health Watch

Information for Enlightened Choices from Harvard Medical School

## Hormone-Replacement Therapy

*How to find the best approach for you*

Our concept of "the change" has changed a lot in the last generation. Menopause is no longer seen as an ordeal to be passively endured, but as a stage of life that can be actively managed — at least in part — with hormone-replacement therapy (HRT). Thirty years of experience has taught us that HRT can be used not

When estrogen production declines, each of these tissues and organs is affected, resulting in the hot flashes, vaginal dryness, and urinary-tract irritation that many women experience. Over time, estrogen deprivation can contribute to the loss of bone density and the development of atherosclerotic plaque.

Estrogen-replacement therapy was originally developed to mitigate the symptoms of menopause and was de-

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*Ten Tips: The Best Suggestions for Attaining and Maintaining the Right Weight*

*What to Expect — and Demand — from Mammography*

# Pulse

**A Day in the Life of the Community**

A banner depicting the world with a stethoscope crossing the center marked the entrance to the first Community Service Day, held in the MFC atrium one October afternoon. Representatives from 30 social service and community agencies from around Boston passed out literature and encouraged HMS students to consider volunteering.

"We're always looking for volunteers," said Delores Thomas, a volunteer for Healthy Start, a prenatal care program for low-income women. Thomas says her organization is particularly attractive to HMS students because it provides them with hands-on experience talking to women in clinics and shelters. "The students get to see what the public is really like."

Also on display were over 30 posters of community action projects developed by HMS students, which facilitated much intermingling between community members and students. One of them was by Urban Health Project student Colin Sox '96, who produced an asthma education video for adolescent patients of the Roxbury Community Health Center and another was by Julie Porch '97, who spent a year before medical school at a clinic in rural Honduras.

Jenny DeVoe '97, who comes from Montana, said she came to the day to "get the big picture" of community service organizations in Boston, especially those involved in adolescent health. She spent the summer before medical school in Seattle as part of the National Service Program, working at an emergency housing service.

Well known activists Paul Farmer '90 and Nancy Oriol '79 spoke about their work providing health services where there is a great need but few resources.

Farmer, instructor in the Department of Social Medicine and who was recently granted a MacArthur "genius" award for his work in a rural health clinic in Haiti (see Summer '93 *Bulletin*), suggested that there are three types of community work: bureacratic, charity and a way that is "steeped in social justice." He called for approaching community work with a sense of shame and of penitence about the juxtaposition of wealth and poverty in our society. He asked students to think about how they can affect change to lessen that gap.

Oriol, director of obstetric anesthesiology at Beth Israel Hospital, delivered a "prescription on how to have a dream and follow it." Her dream


**Family Van founders Cheryl Dorsey '92 (in photo above with a patient) and Nancy Oriol '79 (photo at right, far right).**

Patricia Donahoe, MD presents her patient Anna Mastandrea during the Orientation Clinic.

photo by Barbara Steiner

began in 1989 when, on her way home from work one day, she heard a report on National Public Radio about Boston's high infant mortality rates. She decided one way to approach this problem was to take services to those who needed them. What she created—with the help of Cheryl Dorsey '92 Edward Lowenstein, MD, HMS professor of anaesthesia and Mitchell T. Rabkin '55, president of Beth Israel Hospital—was the Family Van, which offers pregnancy testing, diabetes and blood pressure checks, child birth education and other health services. The van's clientele has grown from an initial 68 clients during the first few months; it now has served over 2,500 clients and made over 500 referrals.

This "hallucination in my head that I couldn't give up on" took a lot of hard work, said Oriol, but she encouraged students not to be discouraged by that: "Work is just hard work and not impossible work."

Audrey Bernfield, associate director of enrichment programs, who coordinated the event along with program coordinator Dee Kerry and students Josh Sharfstein '96 and Yngvild Olsen '96, was pleased with the large turnout. She said she hoped it sent a signal that students were interested in community service, suggesting that they should be funded as generously for their work in that arena as they are for research and international programs. Unfortunately, she said, only those students who can really afford to do so are able to get involved in community work.

"We shouldn't do it out of the goodness of our hearts; we should do it because it's right," said Bernfield.

**Make Room for 1997!**

This year's entering Class of 1997 is the largest ever, consisting of 70 women and 104 men. This reflects a record low in the number of students who turned HMS down upon acceptance. "The big problem was not in finding rooms in Vanderbilt Hall," observes Gerald Foster '51, director of admissions, "but in finding lockers for everyone." There was a pool of riches from which to choose this year; last year's applicant pool was 2,942 students while this year's was 3,111.

The entering class ranges in age from 20 years (four students) to 37 years (one student), with the majority (63) being 22 years old. They come from seven different countries, including Lebanon, Sri Lanka and Yugoslavia; and 31 states, with the largest number, 36, coming from California followed by 26 from New York and 16 from Massachusetts. The Class of 1997's 35 minority students comprise 20 percent of the class. "This is in keeping with our commitment to matriculate a diverse student body," says Foster.

In keeping with past years, Harvard/Radcliffe has contributed the largest number of students to the entering class—43 in all—while as many as 21 students have come from Yale University. MIT follows with 13 students.

Science majors continue to make up the majority of new HMS students (125), followed by 16 social science majors and 14 humanities majors. Of those matriculating, the average MCAT score was 11.27 in the biological sciences, compared to an 8.3 national average.

As has been the trend in recent years, 21 students have taken advantage of the deferment program. Two are Fulbright scholars and one is a Rhodes scholar. One defering student has chosen to research human rights and the Catholic Church in Santiago,

David Muñoz '96, Orestes O'Brien '97, Mario Meallet '96 and Stanley Saulny '97 at orientation.

photo by Barbara Steiner

Chile; while another student will work as an analyst with a health care financing group.

**Joan Ruderman Named to Nelson Chair**

Joan V. Ruderman, PhD is now the Marion V. Nelson Professor of Cell Biology, the first incumbent of a chair stipulated for the basic sciences through the gift of Clarence E. Nelson '37. The professorship—in memory of his first wife—is part of a larger gift of $5 million, based on proceeds of the sale of a building in San Francisco.

Ruderman's research focuses on understanding the pathways that control progression through the cell cycle. She approaches specific questions pertaining to molecular mechanisms by using frog and clam embryos, both of which have rapid, synchronous cell division cycles.

In one area of research, she and her colleagues are trying to figure out the molecular mechanisms by which different cyclins—now known to be universal cell cycle regulators—program cdc2 and related protein kinases for different cell cycle events. Secondly, they are trying to understand the mechanisms that keep full-grown oocytes quiescent and arrested in G2, and how mitogens like hormones or sperm break this cell cycle arrest. Recent insights in her laboratory have led to a new way to explore the roles of certain oncogenes in these cellular events.

To celebrate the new professorship, the families of Joan Ruderman and Clarence Nelson joined Dean Daniel Tosteson '48 in a warm, informal dinner at the medical school in October 1993. The generosity of Nelson and his wife, Louise, was toasted by the dean. After Ruderman explained some of her work in cell biology, much of which is done using clam eggs as a model system, she showed her appreciation by presenting Nelson with a clam shell, inscribed with the Harvard seal and an inscription in his honor.

photo by Barbara Steinter

**A one-day conference called "Breaking the Silence: Asian Americans and Health Care" was sponsored by the Asian Health Association and Ayurveda of HMS on October 23, part of Asian Health Month. The purpose of the conference, say its organizers, was to "shed light on the paradox we see for Asian Americans in health care today. While they represent a significant proportion of the nation's medical school population, there is a disproportionate lack of discussion in the medical community about the concerns and specific needs of this growing minority."**

**Above, keynote speaker Helen Zia, journalist and former executive editor of *Ms.* magazine, talks about hate crimes against Asian Americans. The media and the police, she said, often fail to regard assaults on Asian Americans as hate crimes, even when they result in murder.**

**Suki Terada, an AIDS educator from New York City, discussed how the rate of AIDS in the Asian American community is rising at a faster rate than in any other minority community. The issue of domestic violence was addressed by Boston social worker Carmen Chan, who has worked to establish shelters for Asian women.**

**Other speakers discussed substance abuse and health-care delivery. "This conference is part of a movement to provide culturally competent care," said Andrew Chan '96, a principal organizer of the conference.**

photo by Barbara Steiner

**Clarence Nelson, Joan Ruderman and Dean Tosteson.**

# President's Report

*by Robert J. Glaser*

It is a pleasure for me to submit this report, my first since I assumed the presidency of the HMS Alumni Association last June. I have spent the last two years on the council as president-elect, during the presidencies of George Bernier '60 and Will Cochran '52, and have had the opportunity to become familiar with the activities of the council and the association. I hope to be able to do as well as my predecessors during my term of office.

Having served a three-year term as a councilor from 1956 to 1959, I am impressed with the increased activities of the council, at least as I remember them from my participation some 35 years ago. The flow of information about the complex programs of the school, provided by Dean Tosteson '48, Dean Federman '53 and their colleagues, enables the council members to get a rather detailed picture of the school's achievements as well as the continuing challenges that must be dealt with to keep HMS in the forefront of medical education.

As everyone is painfully aware, medicine has been undergoing dramatic changes as health-care issues have become a major concern to all segments of society. The increasing costs of medical care and of medical education necessitate not only attention but action. How to maintain quality in respect to patient care, research and education in a time of financial stringency must concern all of society and certainly those of us in medicine.

HMS has enjoyed a well-deserved reputation as a premier institution for many years. Major innovations, such as the New Pathway, have been introduced and vigorous efforts have been directed to strengthening every facet of the school's comprehensive programs. These efforts are inevitably never-ending, and all of us who have had the privilege of an HMS education have a continuing obligation to help maintain our alma mater's position of leadership.

The Alumni Council is doing its part in various ways, especially in functioning as an interface between the school and its alumni body. Notably, the council has concerned itself with such pressing issues as the need for more student financial aid. The networking program—a council initiative to help facilitate arrangements for HMS students when they visit other parts of the country to evaluate internship and residency programs—is now under way. Collectively, the members of the council, who are elected by their peers and represent a spectrum of careers in medicine, are able to provide input to the school's administration, and in turn learn more about ways in which the alumni body can maintain and strengthen its ties with the school.

The council held its initial meeting of the current academic year on October 28 and 29, utilizing a slightly different format from last year. We began with an introductory session to welcome new members, and then enjoyed a pleasant dinner with the class agents. The occasion provided all those in attendance with the opportunity to hear Thomas Inui, MD, recently recruited to HMS as professor and chairman of the Department of Ambulatory Care and Prevention. Inui discussed the new program he is heading, one designed to strengthen the attraction of general medicine, a badly needed step if we are to correct the current imbalance between generalists and subspecialists. We need both but in a different mix than currently exists.

I want to take particular note of the upcoming retirement of J. Gordon Scannell '40 as editor of the *Alumni Bulletin*. Gordon has done superbly in making the publication a stimulating and informative one, and all of us are in his debt. He has generously agreed to stay on through this academic year, and we have appointed a search committee to identify a worthy successor—no easy task! Dan Federman will chair the committee, which includes Nancy A. Rigotti '78, George E. Thibault '69 and Alan A. Rozycki '65. I am confident that the committee will greatly appreciate receiving names of potential candidates from alumni. Such suggestions should be sent to Federman at the Alumni Office.

Finally, I want to express my appreciation to the Alumni Association's devoted executive director, Nora Nercessian, PhD, without whose wise guidance and effective administrative skills the entire operation would be in grave difficulty. As all members of the council are primarily involved in other full-time activities, it is Nora who ensures that the council functions appropriately.

*Robert J. Glaser '43B is trustee and director for medical science at the Lucille P. Markey Charitable Trust and consulting professor of medicine at Stanford University. He is former dean of two medical schools, Stanford and the University of Colorado.*

# Book Mark

HANNAH'S HEIRS

THE QUEST FOR THE GENETIC ORIGINS OF ALZHEIMER'S DISEASE

DANIEL A. POLLEN

HANNAH'S HEIRS: THE QUEST FOR THE GENETIC ORIGINS OF ALZHEIMER'S DISEASE
by Daniel A. Pollen
(Oxford University Press, 1993)

*by Eric Larson*

Scientists and science historians are drawn to the process of discovery hoping to learn from past successes and failures. *Hannah's Heirs* describes the pathways leading to recent discoveries establishing the genetic basis for familial Alzheimer's disease. But, the book is more than just another history of discovery. It weaves a fascinating tale of a family that participated in that discovery, parallel with historical developments in biologic psychiatry and neuroscience, and the rise of molecular genetics as the leading edge of modern medical science.

Hannah's heirs are five generations traced back to Hannah, who was born in 1844 in Byelorussia, and her husband, Schlomo. Hannah had nine children. In mid-life she developed difficulty with memory and, eventually, her personal care—signs of what we now call early-onset familial Alzheimer's disease. Jeff, Hannah's great-grandson, was seen by the author, Daniel Pollen '60, a neurologist at University of Massachusetts Medical School, in May 1985. Jeff, his illness and his carefully recorded family pedigree arrived in Dr. Pollen's office about the time linkage for Huntington's disease to the short arm of chromosome 4 was demonstrated.

The tale of Hannah's heirs, a family of Russian Jews, many of whom eventually migrated to America, is interesting and inspirational by itself. The book describes the suffering and foreboding uncertainty experienced by a family with a 50 percent risk of developing symptoms and signs of Alzheimer's disease in mid-life. Members of Hannah's family and various physicians made great efforts to retrace the family's origin and subsequent diaspora to Latvia, America and Central Asia. The family members also displayed remarkable dedication as they availed themselves to scientists trying to unravel the biologic basis of their affliction.

Gregor Mendel, the father of the science of genetics, began his studies of the common garden pea in a monastery in mid-nineteenth century Moravia during Hannah's childhood. Mendel's scientific and intellectual heirs—Thomas Hunt Morgan, Max Delbruck, Oswald Avery, James Watson and Francis Crick—are also described. The work of Landsteiner in the early twentieth century, followed by that of J. Mohr, Sylvia Lawler and others working on blood group antigens, laid the groundwork for early attempts to find linkage and thereby to determine whether any of Hannah's heirs had a high probability of carrying the Alzheimer's gene.

In the 1970s advances by other heirs of Mendel, including molecular biologists in Massachusetts, Seattle, Zurich, Palo Alto and San Francisco, laid the foundations for use of inherited restriction fragment length polymorphisms (RFLPs) to map genetic loci, a technique that eventually led to location of the gene for Huntington's disease.

RFLP techniques would eventually supply the first hopes that the gene responsible for familial Alzheimer's disease in Hannah's heirs had been discovered in the mid-1980s. This hope, however, proved to be a false hope. The development in molecular genetics that eventually did lead to the gene's discovery involved new markers called short tandem repeat (STR) markers—proposed in 1989 and promoted by the Human Genome Project.

The third historical development described by Pollen was that begun by Alois Alzheimer, who along with his contemporaries, Franz Nissel and Emil Kraeplin, helped establish a biologic basis for the dementia of middle life. After a relatively long period of dormancy into the mid-twentieth century, neuroscientists began to focus attention on the neurochemical and neuropathologic basis of Alzheimer's disease.

Here, Pollen describes the growing scientific interest and work of the 1970s and 1980s, along with the intense public interest in Alzheimer's disease, which developed coincidentally in the popular press and advocacy groups. This neuroscientific lineage involved investigations of amyloid and its relationship to Alzheimer's disease, the possible role of transmissible viruses based on Kuru and Creutzfeldt-Jacob disease, and clinical-pathological demonstration of similarities between mid-life Alzheimer's disease and so-called senile dementia.

The three lineages—Hannah's, Mendel's and Alzheimer's—converged in the late 1980s when four groups reported the location of the amyloid protein gene on chromosome 21. A marker for familial Alzheimer's disease

(FAD) was also reported at D21S 11/21. The APP gene proved not to be the marker for FAD and even the observed marker for FAD could not be replicated by a number of labs. The hopes of all three lineages for a breakthrough discovery of the genetic basis of Alzheimer's disease were not fulfilled.

Eventually, a team led by John Handy in London described in February 1991 a mutation within the APP gene on chromosome 21 leading to an abnormal amyloid protein, which Pollen describes as the first abnormal gene found. Again, however, the mutation did not apply to many of the families with Alzheimer's disease, including Hannah's heirs.

Pollen describes the culminating event to this saga in an epilogue dated February 5, 1993. A Seattle group laboriously testing new markers on chromosome 14 convincingly linked a pedigree of German ancestry to the D14S43 marker. Within a short period of time, other groups in Toronto, North Carolina, Tampa and Belgium confirmed linkage in other pedigrees, including Hannah's. Hannah's heirs now face the availability of a genetic marker for their family's affliction, and scientists have gained an important advance in their understanding of Alzheimer's disease.

Pollen concludes his epilogue with a brief description of late-breaking advances in our understanding of late-onset Alzheimer's disease—the observation that presence of the type 4 allele of apolipoprotein E (ApoE) confers susceptibility to the late-onset form of Alzheimer's disease. (Since Pollen's epilogue was written, the ApoE observation has been more widely studied and it is now established that the ApoE gene on chromosome 19 likely plays a role in late-onset Alzheimer's disease.)

*Hannah's Heirs* is an enjoyable and inspiring tale of individuals, families and scientists. An interesting and provocative chapter contrasts the role of mutual aid in evolution and genetic research (especially the willingness of Hannah's descendants to avail themselves to medical science) with the potent, and contrasting, force of individual ambition and the desire to be "first" with a scientific discovery. I only wish Pollen had also included a discussion of the origins and explanation for discoveries that promoted false hopes of AD breakthroughs.

Pollen has provided us with a story that is both exciting and poignant, that informs and instructs, and ultimately will continue as the mystery of Alzheimer's disease unravels in the years to come.

*Eric Larson '73 is medical director, University of Washington Medical Center and professor of medicine, University of Washington School of Medicine.*

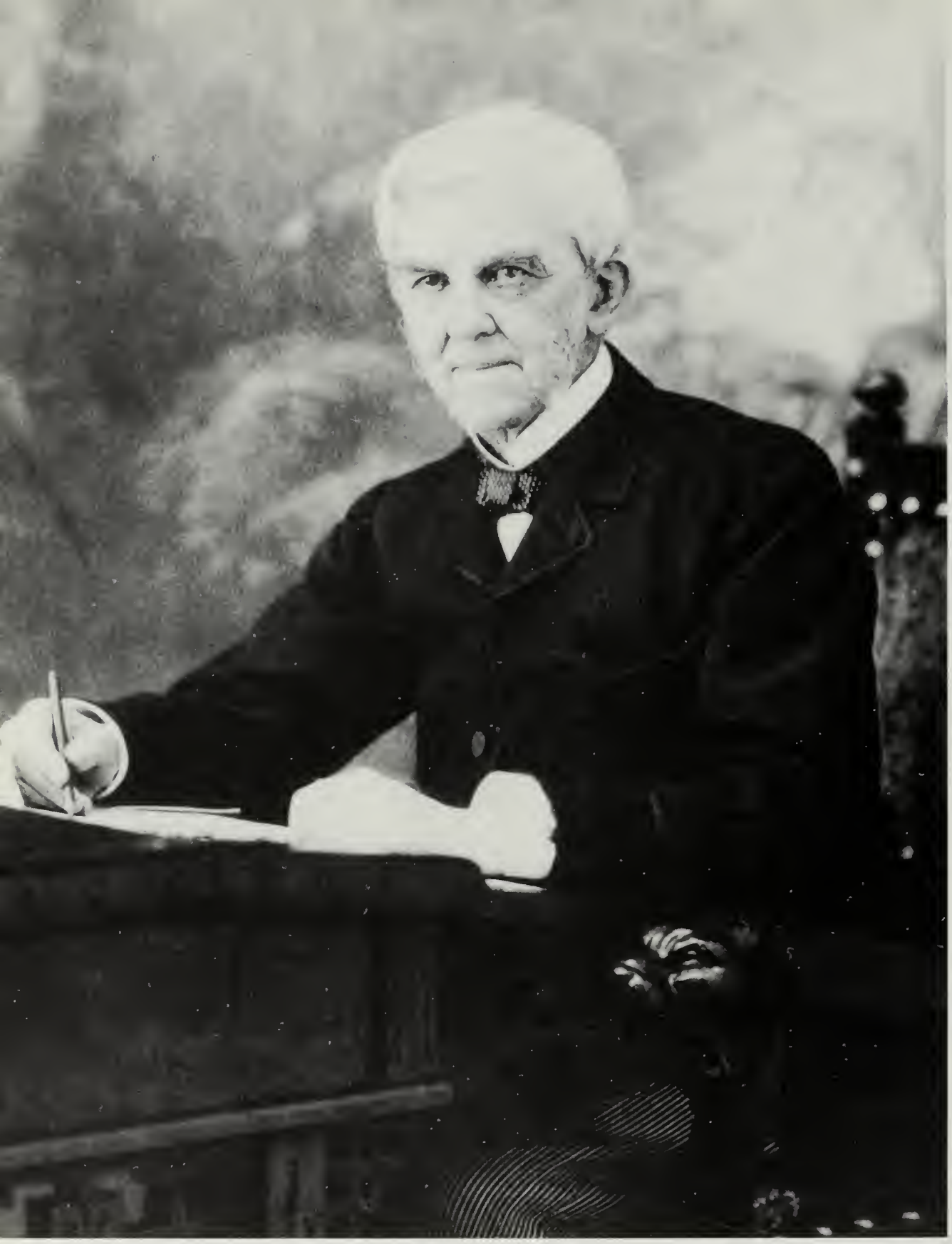

photo courtesy Rare Books, Countway Library

**Oliver Wendell Holmes (1809-1894) was known as a poet, essayist and novelist and was lionized until the end of his days. At HMS, he is remembered as a professor of anatomy, dean from 1847-1853, and as the scientist who identified the nature and cause of puerperal (childbirth) fever.**

# A New Scope on Retirement

*by T. Franklin Williams*

RETIREMENT: "REMOVAL OR WITHdrawal from service, office, or business" and "Portion of a person's life during which a person is retired" (definitions in the *Random House Dictionary of the English Language*).

The common view of almost everyone in Western cultures is that there comes a time in later years when one "retires": gives up one's regular job or profession and begins a more relaxed period of life with varied activities, chosen primarily for personal enjoyment and satisfaction, until life's end. Individual, social and economic justifications are given for retirement: individuals feel they have earned it—through savings, social security and pension contributions—and also that their health and vigor isn't what it used to be; society thinks older people should step aside to make room for younger people in the work force; and businesses think they can hire a new, younger worker at a lower cost than what is being paid the older worker, whose skills may also be seen as fading.

Are these perceptions accurate representations of what is really going on in our world? Accurate or not, are they sound principles to guide us all into the next century? Unfortunately, we have too limited information to answer these questions fully with any precision, but what we do know challenges our general beliefs and current policies to a considerable degree.

One of our major needs is more adequate and accurate information on just what actually are the intentions and practices of Americans as they approach what we consider to be a usual retirement age of 65. There was a federally supported retirement history survey, but it was shut down in 1979. In the mid-1980s the National Academy of Sciences' Committee on National Statistics, with support from the National Institute on Aging and other federal agencies, developed recommendations for the need for additional statistics on our aging population.

In 1986, with congressional support, the Federal Forum on Aging-Related Statistics was established, involving some 30 federal agencies and co-chaired by the directors of the Bureau of the Census, the National Center on Health Statistics and the National Institute on Aging. This forum provided the opportunity to define more adequately just what our informational needs are, including those related to retirement. In 1991 the National Institute on Aging (with participation of other agencies) was able to fund a new, longitudinal health and retirement survey, under the leadership of Thomas Juster, PHD, professor of economics at the University of Michigan and Richard Suzman, PHD, chief of the Office of Demography at the National Institute on Aging.

Beginning with a national sample of almost 13,000 individuals, ranging in age from 51 to 61, this survey will follow these persons as they move into usual retirement ages and will periodically collect information on their labor force participation, their health conditions and health status, aspects of their economic status and pensions, and features of their family structure, social and intergenerational support and mobility. This major survey will provide increasingly specific and valuable information about actual retirement practices and preferences among Americans, in relation to health and other characteristics.

The first round of the survey already has been completed and the initial findings are enlightening, as they raise questions about some of our long-held assumptions. For example, 6 to 20 percent of those surveyed list themselves as already retired (the variation depending on other characteristics such as gender and marital status). Another 5 to 18 percent consider themselves too disabled to work and 2 to 7 percent are unemployed. Overall, in this age decade in which one might expect persons to be at their most active and productive levels, only 60 to 70 percent reported that they were working regularly.

There were only small differences between married and nonmarried persons, or between men and women. Among those working now, a large proportion, 75 percent, indicated they would like to continue to work much longer, on a gradually declining and flexible basis, including proportional declines in pay. Almost all, however,

thought this was not feasible or acceptable in their employment settings. Most (64 percent) were not willing to risk a change of jobs, largely because they were afraid they would lose pension and health insurance benefits (at least the latter fear may be eliminated with the proposed comprehensive health reform).

"These early results paint a picture of Americans...who want to stay active and engaged. We may want to look at expanding opportunities for them as the entire society ages," commented Gene D. Cohen, MD/PhD, deputy director of the National Institute on Aging.

Thus, retirement or leaving the work force begins much earlier for many persons than our common beliefs would suggest. We need to learn much more about how many people who do "retire" from one job actually make a choice to enter another, and at what age or stage of their lives.

Our interest in retirement practices must go beyond simple curiosity. Evidence suggests that early in the next century, when the "baby boom" generation will be reaching retirement age, our nation will actually face a serious shortage of persons available for the workforce—people needed to maintain our productivity and economy—unless more persons continue or return to employment.

Another factor still affecting work and retirement in some sectors of our society is the issue of mandatory retirement. The example that has perhaps received the most attention is the mandatory retirement age of 60 for commercial airline pilots. This regulation was established by the Federal Aviation Administration in 1960 and has been discussed and questioned a number of times by various scientific and policy bodies since then.

This issue serves to highlight what we have learned in recent years about the maintenance of health and effective functioning in virtually every organ system into very late years, in the majority of persons who practice sensible lifestyles and who are fortunate enough not to have one or more chronic diseases. Careful studies show that maximum cardiac output, maximum aerobic capacity, renal function, brain metabolic function and mental performance can all be as good in many people at least on into their 80s as in much younger persons. Furthermore, we now have sound ways to assess these various functions and can make dependable judgments about the capabilities of a given person for a given job, regardless of age.

To return to pilots: the best available evidence indicates that pilots in their 60s, at least those who are actively flying, have a much better safety record than pilots under the age of 40. (This information is only available on general aviation pilots since, by regulation, the commercial airline pilots' performance does not exist beyond age 60.) In addition, when it comes to such concerns as the risk of a sudden catastrophic event in a pilot, such as a cardiac arrhythmia or myocardial infarction, we know that men in their 60s who have been tested with stress tests and thallium scans and found to have no evidence for coronary artery disease have a distinctly lower risk of such sudden episodes than men in their 40s who have hypertension and are smokers. Yet the latter men would be acceptable as commercial airline pilots under the current rules.

## Retirement no longer mandated

**January 1994 signals the end of a mandatory retirement age in universities and colleges across the country. With the idea of prohibiting age-based discrimination, federal law and its amendments over the past 25 years have defined and gradually redefined retirement age from age 65 to 70 to limitless.**

**The latest amendment to 1967's Age Discrimination in Employment Act, passed in 1987, eliminates all age-based mandatory retirement—with the exception of a "bona fide executive," an employee with top executive decision-making authority, who could be made to retire at 65. (This exception might apply to department heads.) Enforcement of this amendment in universities and colleges, however, was deferred until January 1, 1994.**

**What sounds like something that merely enhances one's freedom of choice has many personal, institutional and societal ramifications. For one thing, says Eleanor Shore '55, HMS dean for faculty affairs, "There are conflicting social issues. We are a country with a growing elderly population who we want to work a long time so they don't draw on Social Security. On the other hand, the longer they stay in the work force, the fewer jobs open for the young."**

**At HMS there are similar concerns that relate even more intimately to the vitality of a research institution. Whereas no one knows when faculty will naturally retire when there is no maximum age, "Our guess is that fewer will retire when they don't have to," says Shore. For the 10 years that retirement has been at 70, about 85 percent of the HMS faculty have waited until the maximum age to retire.**

**This is the highest percentage of any college or university surveyed by a National Academy of Sciences committee commissioned by Congress to report on expected effects of the 1987 amendment on institutions of higher education. The academy study found that at most colleges and universities, few tenured faculty would continue working past age 70 when mandatory retirement is eliminated, but that at a few research institutions, a high proportion of faculty would in fact work past 70.**

**The academy's report summarizes the reasons why senior faculty may not want to retire: "Evidence suggests that faculty who are research oriented, enjoy inspiring students, have**

The bottom line is that there is no sound basis for a policy of mandatory retirement based on age alone, at least up through the 60s (beyond age 70, we simply do not have adequate data). The National Institute on Aging has taken that position with the Federal Aviation Administration. Similarly, in court proceedings a few years ago involving test pilots for Lockheed Aviation—who were under a similar restriction placed by the company, not the FAA—I provided similar testimony and an out-of-court settlement was reached in which test pilots are now allowed to continue their employment to at least age 63, provided they pass a specified set of examinations yearly.

But what about when persons do retire from regular work, for whatever reasons? Again, we have evidence for a changing scene and expanded possibilities and challenges. The social scientist Robert Kahn at the University of Michigan and others argue persuasively that productive contributions to society consist of many activities in addition to formal employment. Among persons who are nominally "retired," these activities commonly include child care of grandchildren whose parents are out working; repairing or painting one's own house; or volunteering in a community hospital or other program.

Kahn defines productive activities as any that might be expected to be remunerated under certain circumstances. In his studies of productivity, Kahn has found that, on average, "retired" people are making more contributions in terms of dollar value than they are receiving in support from society, at least up to age 75. It is clear that these types of productive contributions can be increased in coming years, for the benefit of everyone.

In summary, I believe we can look forward to more changing scenes in what have been thought of as the retirement years, and more variety in the pathways different persons may choose. Perhaps there will be positive responses for those who want more flexible hours and schedules as they wind down in their regular work. Second and third careers will be more common as more people live longer and healthier lives. Any vestigial rules about mandatory age-related retirement will be replaced by standards of competence and performance regardless of age.

More and more people in their later years will continue to make productive contributions within their families, their communities and around the world, for the benefit of others as well as for their own satisfaction. And thanks to ongoing studies, we will have better handles on just whether and to what extent such predictions as these are really happening.

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**light teaching loads, and are covered by pension plans that reward later retirement are more likely to work past age 70."**

**"We hit every one of those factors here," says Shore. "Our faculty like what they're doing. This is their life, where their colleagues are."**

**So what's so bad about that?**

**A committee was formed to assess for the dean the impact of retirement changes at HMS. Headed by W. Gerald Austen '55, Edward D. Churchill Professor of Surgery and head of the MGH Department of Surgery, the committee recommended ways to encourage retirement and at the same time better use the talents of emeritus faculty.**

**At issue here is limited research space and money. How can you bring in young faculty if the professors continue to occupy their same laboratory space, even when they might not be attracting the same funding anymore? Shore cites figures from HMS in which administrators found that professors had two and one-half times as much space as assistant professors and eight times as much space as post-docs. "We need to have some kind of formula for overhead and space that relates to productivity," says Shore, who served on the Austen committee. "It is critical to preserve the anabolism of research."**

**The question then became, what kind of incentives should there be for retirement. A committee is now working on the fiscal implications of various options.**

**Part-time work is a possibility that is very attractive in one's older years, an option that Shore says needs to be explored more thoroughly. The Austen committee also found in interviewing newly emeritus faculty that financial concerns are prominent—particularly the fear of salary loss and the costs of long-term care down the road. Addressing these concerns will be an important part of an attractive retirement package.**

**Continued intellectual stimulation is also a concern. Those who can get the funding can continue research past retirement and perhaps do some teaching, as needed.**

**"The point is that once retired, the door to the medical school does not shut," says Shore. "We just have to find more interesting, valuable ways to use the talents of retired faculty."**

**As Shore points out, the goal really is to have enough options in place that faculty can retire when they want to.**

***Ellen Barlow***

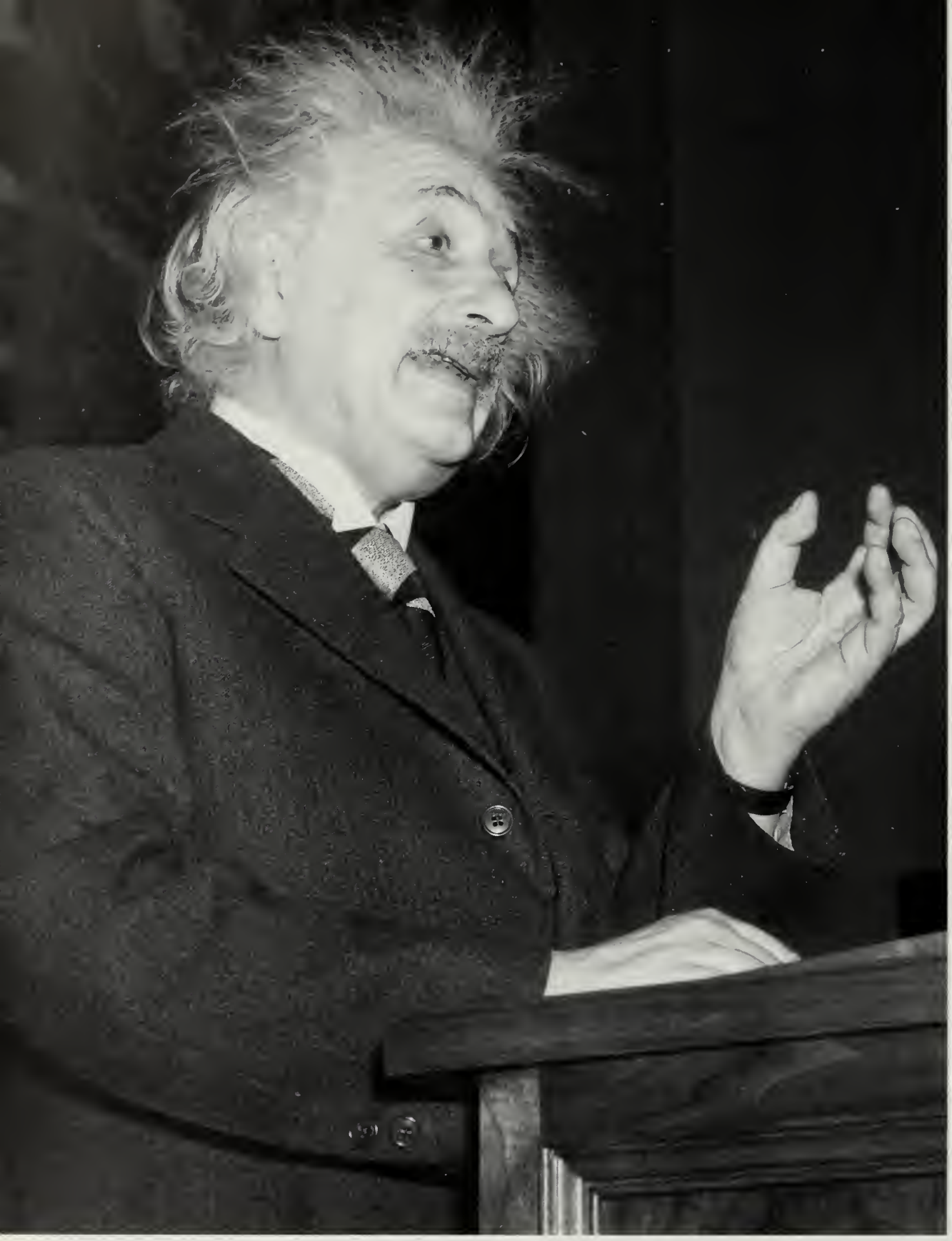

photo courtesy UPI/Bettmann

**Albert Einstein (1879-1955) displayed an early genius in mathematics and is known for three important theoretical papers—including his infamous theory of relativity—published early in his life. He spent the end of his life in what seemed a futile attempt at unified field theory, a comprehensive explanation of the universe; but that work now is at the cutting edge of superstring theory.**

# The Shortened Step

*the last chapter of Joseph Garland's autobiography* A Time For Remembering

THIS ISSUE OF THE *BULLETIN OF THE New York Academy of Medicine* has been dedicated to the proposition that all who live long enough must face the limitations imposed by old age and enjoy its benefits. The wisdom of being prepared for such an eventuality should appear obvious. The general approach to old age may inspire in the older person a need to philosophize a little, not resentfully, but at times with some anxiety, as when he remembers that he has made no will, or recalls the warning on the sundial that it is later than he thinks.

Santayana seemed to accept the situation philosophically, if a little prematurely, when he wrote:

Old age, on tiptoe, lays her jeweled hand
Lightly in mine. Come, tread a stately measure,
Most gracious partner, nobly poised and bland.

His title having been *A Minuet on Reaching the Age of Fifty* reveals that he was then a relative youngster with nearly 40 years still ahead of him, for he missed reaching 90 by the breadth of a hair. On another occasion Santayana wrote: "There is no cure for birth and death save to enjoy the interval."

*Originally appeared in the* Bulletin of the New York Academy of Medicine , *Vol. 47 No. 11, November 1971. Reprinted courtesy of the New York Academy of Medicine Library.*

Old age, at its best, should be considered merely as a not unwelcome slowing-down process in which most of one's faculties may be retained but one in which a careful sure-footedness is wisely substituted for speed. It takes more and more time to accomplish less and less, and it must be remembered that the long-distance race is not always to the swift.

Nearly 20 years ago, when I was well launched on my second career as editor of the *New England Journal of Medicine*, having already devoted a quarter century to the practice of pediatrics, I published a short essay, "Management of Dyspnea," by Francis W. Palfrey, a highly capable but unassuming internist whom I greatly admired. Dr. Palfrey had noticed that Swiss mountain guides, when the grade they were ascending became steeper, shortened their steps—sometimes to only a few inches—but maintained the rate and rhythm. Having thus shifted into a lower gear, they would continue climbing hour after hour with no apparent effort.

Dr. Palfrey tried this technique on a patient, an elderly man whose chief satisfaction in life was dining and spending evenings at his club, a short but uphill walk from his home. This walk was becoming increasingly difficult until, at Dr. Palfrey's suggestion, he shortened his steps, after which he was able to continue for some time longer.

The article, with its common-sense message, was later made the basis for an editorial in the *Journal*, under the title "The Shortened Step." Therein it was pointed out that "age is relative and yet in this day, with more older people in the world than ever before, in terms of years, retirement is thrust on many persons arbitrarily and, in many instances, prematurely..." There are those who can still go at full stride as the years accumulate; for many others the need is not to halt progress but to shorten the step for "human contentment," as Dr. Palfrey phrased it.

It has been said, with some conviction, that one should change his job, if circumstances permit, at about the age when Santayana started walking with old age on tiptoe, and Wilder Penfield gives credence to this thesis in his collection of essays and addresses published as *The Second Career*. The second career, however, according to Dr. Penfield, need not and perhaps should not be only consecutive to one's chief occupation in life. It may begin even earlier than the professional or business career and run parallel with it until such time as it may assume the greater importance of the two or replace the first entirely. Dr. Penfield himself provides a case in point, for during his most active years as a distinguished neurosurgeon, including those in which he directed the Montreal Neurological Institute, he produced several books, among which are two historical novels, the definitive biography of Alan Gregg—

"a man for all seasons"—and many essays and addresses. And yet he never allowed his writing to interfere with his professional commitments. A second career, in fact, is almost an essential introduction to a successful old age.

Especially comforting is Penfield's final chapter in *The Second Career*, on "The Use of Idleness." Idleness is not synonymous with laziness; rather it is the antidote for overabundant and not always fruitful activity; the diastole during which the heart regains its strength and courage for the next contraction.

I read some time ago a panegyric by an admiring reporter of a supersuccessful surgeon whose operating rooms were so organized that none of his time was wasted. All he needed to do, apparently, was to trot from one room to another, dabbling his fingers in a bowl of antiseptic solution and changing his gloves on the way. Not a moment was lost as he trotted on toward old age, looking neither to the right nor the left—but what a life! It must be admitted that some persons, on the other hand, make a single career of idleness, like Ferdinand the bull stretched out beneath his cork tree, but that is another matter.

Among others who have achieved brilliant second careers without jeopardizing the first, I recall Robert Montraville Green, one of my teachers of anatomy more than 50 years ago: surgeon and obstetrician, teacher of Greek, translator of Latin odes, and one-time editor of the *Boston Medical and Surgical Journal* before it became the *New England Journal of Medicine*. Starting while he was still in Harvard College, from which he graduated summa cum laude in English and the classics, he set himself the task of putting into blank verse the entire story of King Arthur and his knights of the Round Table, which was completed 50 years later; the first of the five volumes was published posthumously.

A wealth of second careers is

**Arthur J. Linenthal '41**

*"My wife says I'm retired but busier than ever," says Arthur Linenthal '41, who retired from his position as physician-in-chief of the Hebrew Rehabilitation Center for Aged in 1981.*

*Linenthal began his work at the center in 1965, when a more formal affiliation was established between the center and Beth Israel Hospital. In 1981 Linenthal began a year-long sabbatical, after which he returned to the center part time as Edvardas Kaminskas, MD assumed the chief position. "It was a wonderful time," he says. "I was practicing medicine and Dr. Kaminskas had all the headaches."*

*While on sabbatical, Linenthal began writing a history of the medical care of Jewish immigrants, leading to the development of Boston's Jewish hospitals. He embarked upon retirement full time in 1985 so he could devote all his attention to the book, entitled* First A Dream: The History of Boston's Jewish Hospitals, *1896 to 1928 (Beth Israel Hospital and Countway Library, 1990), which he says still took him five more years to finish.*

*He has shifted gears a bit, and is currently working on a book "that has nothing to do with medicine or hospitals." He and his wife, Violet, are compiling letters and other archival material of Harvard University philosophy professor George Herbert Palmer—with whom Linenthal's father studied at the college—and his wife, Alice Freeman Palmer, who was the second president of Wellesley College.*

*Linenthal looks pleased as he muses on the growth of the Hebrew Rehabilitation Center since his time there. "I think it's a great place," he says. When asked his thoughts about medical students and new physicians considering geriatrics, he replies "You have to like old people in order to work there. You have to want to give of yourself."*

Terri L. Rutter

included in *Doctors Afield*, a series of short biographical sketches of physicians who had achieved distinction of sorts in pursuits unrelated to medicine. These sketches have been published over a number of years; one still occasionally appears in the *New England Journal of Medicine*. Literature has led the list of activities represented, but the whole field has been remarkably diversified; subjects have included explorers, licensed minters of coinage, Drs. Joseph Guillotin and Richard Gatling, responsible for the lethal instruments that bear their names, and more than a hundred others.

Wordsworth, pondering over his *Intimations of Immortality*, characterized our birth as but a sleep and a forgetting, which has given rise to some pondering by others, for it would seem more natural that the sleep and the forgetting should apply rather to the distal than the proximal end of life. One cannot help recalling the last two of Shakespeare's seven ages, in which the "lean and slippered pantaloon" slips into "second childishness, and mere oblivion."

On the other hand, and on a more cheerful note, is the account of the two elderly but hearty lumbermen who were brought out of the woods by their employers to bear witness in a lawsuit. The lumbermen testified so convincingly, despite their octogenarianism, that the judge, impressed, asked them to what they attributed their prolonged survival in such good mental and physical condition. One seemed convinced that it was due to his lifelong abstinence from alcohol; the other that from an early age he had let no day pass without a shot of that which cheers and oft inebriates. The discrepancy was easily explained; they were like the logs that constituted such an important part of their daily lives. Keep them constantly dry or immersed and they will last forever.

Other factors besides a second career are essential to a happy and rewarding old age. One must preserve one's optimism and maintain his

**Joe Garland**

human contacts, following Samuel Johnson's advice to keep one's friendships in repair. This, of course, implies dipping into the lower-age groups as one grows older. One of my most valued friends is 85 and still practicing; two others, *mirabile dictu*, are 90, active physically and actively interested in living.

An end, however, must come to everything, including old age. As Penfield wrote in the first chapter of *The Second Career*, for which the book itself is named:

"Toward the end, senescence with its comforting drowsiness closes stealthily one door after another. And so when death does come at last, it may not be unwelcome after all. Science has not changed these things. The span of life, for those who escape its early perils, is about the same today as when David played on his harp before King Saul.

To most men there should come a time for shifting harness, for lightening the load one way and adjusting it for greater effort in another...It can be a delight to a man, who comes at last to a well-earned job instead of a well-earned rest..."

There is a fixed belief, especially among young and inexperienced physicians, that human life must be prolonged at any cost, regardless of the suffering involved. The means for doing this have, of course, increased tremendously as the scientific progress of medicine has outstripped the wisdom that should guide its application.

What follows old age? No one knows. When William Osler in 1904 delivered at Harvard University the sixth Ingersoll Lecture on Immortality—his subject being "Science and Immortality"—he avoided committing himself to any belief by citing Cicero, "who had rather be mistaken with Plato than be in the right with those who deny altogether the life after death; and this is my own *confessio fidei*."

In closing I shall take the liberty of borrowing the verse by Dr. S. Weir Mitchell with which Walter Cannon concluded the story of his own truly productive life:

I know the night is near at hand.
The mists lie low on hill and bay,
The autumn sheaves are dewless, dry;
But I have had the day.

*Joseph Garland '19 (1893—1973) was editor of the* New England Journal of Medicine *from 1947 and 1967 and twice editor of the* Harvard Medical Alumni Bulletin. *He wrote numerous books, including the* Doctor's Saddlebag, The Youngest of the Family, The Story of Medicine *and* All Creatures Here Below.

photo courtesy UPI/Bettmann

**Katharine Hepburn, age 86, has appeared in over 30 films in addition to several television movies and plays. She has won three Academy Awards for best actress, including one for *On Golden Pond* in 1981 when she was 74 years old. In the photo above, she is on location for the movie *The Ultimate Solution of Grace Quigley*, made in 1985.**

# It's Not Easy Being Old

*by Doris R. Bennett*

When I was in my 40s, I made up my mind that when the time came, I was going to grow old gracefully. I wasn't going to pretend that I was still young. I wasn't going to color my white hair (actually, I had already tried, but the brown dye turned orange on my salt-and-pepper locks). I wasn't going to invest in face-lifts or tummy-tucks; no expensive skin treatments, no spas or fat-farms, no Jane Fonda or Jennie Craig. I would, when the time came, accept whatever ravages of age the fates bestowed upon me.

So-o-o, the time has finally come. I have grown old gradually, irrevocably, inevitably, unattractively, unbearably, intolerably, but not gracefully.

Frankly, I hate it! I hate it when bus drivers reach out to give me a hand as I board the bus. I hate it when young women, burgeoning in the ninth month of pregnancy, get up to offer me their seats on the bus. I hate it when young boys try to earn merit badges by escorting me across the street. I hate it when the ticket-seller at the movies automatically gives me a senior citizen ticket (but I like it when she charges me only $2.50).

I hate it when a mother tells my receptionist that she can't remember the name of her child's pediatrician, but she knows it's "that old woman." I hate it when I ache all over after an afternoon of gardening, or when I get exhausted after a two-mile walk. I hate it when I can't remember the name of a patient I've known for 10 years, or when, in the middle of a speech, my mind goes blank and I can't think of the word I need.

*Most of all, I hate the sense of being on a toboggan hurtling rapidly downhill.*

I hate looking in the mirror, trying on bathing-suits, shopping for clothes. I don't know which saleswomen I hate the most—the condescending, matronly ladies at Lord and Taylor's who call me "dearie," or the svelte, arrogant young women at Bloomingdale's who look around me or over me, pretending that I'm not there at all.

Most of all, I hate the sense of being on a toboggan hurtling rapidly downhill, inexorably heading to that final moment—and this toboggan has no brakes!

But, it's not all bad—old age has some bonuses. There is a newfound freedom from the responsibilities I have shouldered all my life. No more worrying about my own children—they've come out all right and can deal with their own problems. No more worrying about other people's children—they've found new doctors and are doing just fine, thank you. No more sense of being tied down or encumbered—I'm free to pick up and go wherever and whenever I want—which is delightful!

It is absolutely wonderful to sit down with a good novel in the middle of the afternoon, without feeling guilty. Most gratifying is the sense that I no longer, after many many years, have to prove myself. No longer do I have to worry about upholding the good name of women at HMS—I've already done that. No longer do I have to strive for awards, appointments, acknowledgments of my professional prowess. I've done all that, and have finally realized that it was caring for patients and teaching this art to students that was its own reward.

The bonus of the third generation—little Becky, and very little Sam—almost makes getting old worthwhile. I love my little 4 1/2-year-old who saves her serious questions for

**Carl Taylor '42**

*For Carl Taylor '42, retirement means being able to say yes, and no.*

*"Since becoming emeritus nine years ago, it has been wonderful to say no and to do what I choose."*

*In retirement, Taylor has been saying yes to doing more of what he has always done, such as the health-care work he began in China in 1984. "I don't get paid for this work, if that enters into the definition of retirement. But that makes it more fun."*

*Fifteen years ago, as professor of international health at Johns Hopkins School of Medicine, Taylor coordinated a comparison project of health-care delivery between a county in Maryland with one in China. The following year, he launched a program called the "Ten Model Counties Project" designed to bring modern ideas of maternal and child health to Chinese villages. The original 10 counties quickly expanded, and now the project encompasses 300 of the poorest counties in China and reaches over 200 million people.*

*When Taylor became emeritus, the Chinese goverment asked him to be their U.S. UNICEF representative. Taylor now returns to China once or twice a year to monitor and evaluate the program. He became involved with UNICEF 30 years ago through his work with the World Health Organization.*

*This past summer Taylor travelled to Tibet, "obviously one of the most needy places in China," but ironically, also home to "the most beautiful valley in the whole world" along its border with Nepal. He began working in Tibet in 1985 developing programs in child and maternal health.*

*Closer to home, Taylor is working on a program in one of Baltimore's poorest neighborhoods, Sandtown-Winchester. There he is applying methods and ideas he has learned from his years in international public health to develop a community health system similar to the ones in China.*

*When asked if he will ever really retire, Taylor laughs and asks, as if truly surprised at the question, "What do you mean by that? I am retired."*

Terri L. Rutter

her wise old grandmother: "Grandma, are girls supposed to like boys?" "Grandma, can girls be doctors after they become mommies and lawyers?"

And I must give equal time to baby Sam, who says "Da," and, after carefully ascertaining that nobody is looking, scoots up the stairs on all fours to explore the forbidden sanctuary of his sister's room.

Would I give up these wonderful little bonuses for perpetual youth? Hard to say—I wish it didn't have to be quid pro quo.

I have delineated some of the pros and cons of growing old, and I think the reader will agree with me that, on balance, it would be better to be growing young. Since life doesn't work that way, we must grow old, if not gracefully, with resignation—as best we can, counting our blessings of freedom, nothing to prove, and those little Beckys and baby Sams who make our remaining years so joyful.

*Doris R. Bennett '49 is chairman of the alumni fund and HMS instructor in pediatrics. She retired in 1991 from the Department of Pediatrics at Harvard Community Health Plan.*

photo by Bob Frechette (John Hancock)

**Bradford (age 83.5) and Barbara (79) Washburn have together mapped mountains for *National Geographic* over the past 53 years—Mt. McKinley, Grand Canyon, Mt. Washington and, most recently, the one everyone said couldn't be done, Mt. Everest, a relief model of which they pose in front of in this photograph. Brad Washburn is also known as the director of Boston's Museum of Science.**

# The Fountain of Age

*excerpt from the book by Betty Friedan*

AT GERONTOLOGICAL CONFERENCES, I often sought out the unpublicized sessions on "Late-Life Art." They were held in small, dark rooms, down obscure back hotel corridors, not very well attended, considering the standing-room-only ballroom sessions on new developments in Alzheimer's disease or nursing home management. I usually ran into the by now familiar faces of my gerontological underground—James Birren, Rick Moody of Brookdale, Robert Kastenbaum, Nancy Datan, David Gutmann. The gerontological establishment had refused to let them set up a division of humanistic studies of aging; it was dismissed as "not scientific." But the questions they dealt with seemed pertinent to my own search for the fountain of age.

In artists who went on working throughout a long life—Michelangelo, Rembrandt, Beethoven, Yeats, Picasso—was there a continued or new development in their art that hinted at possible further stages of human growth in age? From these sessions I learned that late-life creativity is considered strongly suspect among gerontologists, controversial and certainly not biologically programmed or universal. But I also learned that artistic or scientific creativity does not uniformly peak in youth. As Elliot Jacques pointed out, a number of scientists and artists have flowered and done their best work by their late thirties. Of these an unusually large number die in their forties; of those who survive and transcend the midlife crisis, some develop profound new directions.

At one such session, someone said of Yeats: "In youth, his metaphor of self was escape, in age it was encounter. His mind worked harder and harder as his body declined. By his seventies, his language revealed the height of its powers. He now stood for something beyond himself; the Irish people." Rick Moody traced the late-life development of Beethoven, from the virtuoso technical brilliance of the sonata Appassionata at thirty-four to the contemplative Quintet in A Minor, No. 2, of his age, and the loosening of form to celebrate the human voice in his great Ninth Symphony, long after he was completely deaf. Someone else contrasted the youthful idealism of Michelangelo's *Pietà* sculpted at twenty-five with the groping toward new form of his *Pietà* at eighty-nine, as if his earlier style had become meaningless to him.

Grappling with such comparisons, I began to make my own—in museums and galleries in New York, Los Angeles, Madrid, where I could find retrospectives of late-life art. Was this an explosion beyond previous limits in age—or a condensation into something simple, intimate, vulnerable, something intensely emotional, and personal, not hiding anything and yet reaching finally beyond the self? A lengthening or loosening of structure, an enmeshing of figures into one another, losing their separateness and glowing from within? A getting beneath or beyond surface appearance—decorative detail, idealization, heavy heroics—to deep, somber, undecorated inner reality, as in Rembrandt's last self-portraits or T.S. Eliot's poems: "At last, the true distinguished thing?"

Not all artists or scientists continue to develop in creativity as they age, we are often reminded. Wordsworth grew stale. But I found that the people who do keep on developing—sometimes after a hiatus, a period of stagnation—celebrate the distinctive voice of age. They also seem ready to risk the large questions, putting it all together, that they would have been afraid to ask in

**John Radebaugh Jr. '52**

*Professional fly-tying—his business card reads "Dr. John's Flies: 'The Right Medicine for Trout' "—and recreational fly-fishing are a far cry from house calls, but that's the direction John Radebaugh Jr. '52 took after retirement in July 1991. Going out a couple times a week, he would even call his fishy hobby an "addiction." His best catch thus far has been a 20-inch landlocked salmon, which he caught from the shore.*

*When he wasn't with a reel in his hand, until just recently Radebaugh was volunteering at the Good Neighbor Health Center in White River Junction, Vermont—a full health-care and social service facility for people who have lost their insurance or who otherwise can't afford health care. He had to quit practicing there, however, because he stopped paying his malpractice insurance: "Malpractice is so costly that to volunteer and pay malpractice seems incongruous." He continues to serve the clinic in other ways, however, by answering the telephone and doing other nonmedical services.*

*Radebaugh is also teaching a course at Dartmouth Medical School, where he is an emeritus professor of family medicine, about problem-based learning. It's a real challenge, he says. "The students are so bright. I'm in the library quite a bit, reading up on basic sciences and such to keep up with them."*

*Before retirement, he worked two years in a rural area in the White Mountains making frequent house calls, which he says are "an essential part of a rural practice." He says he wasn't prepared for retirement. "I really enjoyed practice. The interaction with patients has been a source of satisfaction."*

*Radebaugh is a strong advocate for a single-payer system and travels around his state, which is working to design its own universal health plan, speaking in support of a Canadian-based system. "In years of practicing in various areas of the country, I've become very concerned about people who can't get proper insurance or who have economic difficulties," he says. "Our system doesn't offer much."*

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youth—questions they often do not finish answering. And this, of course, was deemed a decline from their surer, earlier peaks. Einstein, for instance, after his monumental contribution of relativity, spent the end of his life in what seemed a futile attempt at a unified field theory, uniting the principles of gravity, electromagnetism, and the interactions of strong and weak particles into a single, comprehensive explanation of the universe. That work, considered a "failure" unfinished at his death, is now being carried forward by my son's generation of theoretical physicists, on the cutting edge of superstring theory. And those who decried Einstein's final attempt at a unified field theory as a decline from his youthful peak are having second thoughts.

And yet many an outraged gerontologist insists: "There's no such thing as late-life art. There are just artists who get old and refuse to stop working in age, when they should." Why do some artists and scientists struggle to keep on, often after deafness, strokes, severe physical impairment? Perhaps because for them the mind *(the self)* is not impaired in age but continues to grow and develop. For those who don't stop, may not something new emerge? Why does that prospect seem to threaten us so? Why do we feel such a need to diminish or disparage the very possibility of continued or new creativity in age?

*Betty Friedan is a founder of the National Organization for Women and the National Women's Caucus, and is the author of* The Feminine Mystique. *She teaches at New York University and the University of Southern California. She has three children; her daughter Ellen graduated from HMS, Class of 1982.*

photo courtesy UPI/Bettmann

**Toni Morrison, age 62, began writing when she was in her 40s, following a career as an editor at Random House. Since the publication of her first book, *Bluest Eye*, in 1970, she has published six more, including *Beloved* in 1987, for which she won a Pulitzer Prize. She was awarded the Nobel Prize in literature in 1993.**

# Research on the Aging Woman

*by Jeanne Wei*

As issues concerning women's health gain more attention, too often the focus is primarly on women who are in the childbearing years while the the health-care needs of women over 65 years go unmet, both by medical research and by our society. And yet, 70 percent of all Americans aged 85 years and older, the most rapidly increasing segment of the population, are women; and 80 percent of all nursing home patients are women.

Although life expectancy for women who reach age 65 is better than for men (83.6 is the average for women, 79.8 for men), it is not clear that this longer life span is necessarily a cause for celebration. Older women are much more likely to live alone than older men (41 percent versus 18 percent) and older women are more likely to be living on a poverty level income (median annual income of $7,655 for women versus $13,107 for men).

This generation of older women, those above 65 years of age, likely have made sacrifices for others most of their lives and now deserve our support. They are the ones who endured the hardships of the Great Depression, postponed achieving their dreams during the World War II years, stayed at home and raised children during the fifties and sixties, took care of their ailing parents during the seventies and eighties, took care of their ailing husbands during the eighties and nineties, and now face, or will face, an old age of widowhood, loneliness and poverty.

After a lifetime of personal sacrifices and living through unprecedented change in American society, these older women—our mothers, sisters, wives and ourselves—will face an uncertain future. These women will also have unmet health-care needs, which would certainly benefit from further research.

Recent research efforts have helped to shed light on the important area of older women's health. We know that cardiovascular disease is the number one killer of older women, as it is of older men. Heart failure is six times more common for women and men over the age of 65 than for younger persons, and the prevalence of heart failure rises more steeply with age in women, at one and one-half times the rate in men.

Contrary to long-prevailing thought, it has been established that impaired heart muscle relaxation (diastolic dysfunction), not impaired heart muscle contraction (systolic dysfunction), is the primary cause of heart failure in the elderly, especially in older women. This is because with advancing age, the heart muscle is able to pump blood as well as in younger persons, but it is not able to relax as quickly, thus the heart chamber is not able to fill as efficiently. Contrary to what was previously thought, more oxygen and energy are required for relaxation than for contraction, so the development of relaxation abnormalities often precedes that of contraction abnormalities.

Why do muscle relaxation abnormalities develop in old age? First, the blood vessels stiffen with age, so the older heart is required to pump against a greater resistance. This places a greater workload on the heart, which in turn causes the heart muscle cells to enlarge in compensation. The increased heart size, together with changes caused by age in the connective tissue in which the heart cells are embedded, make the heart muscle stiffer and therefore more resistant to changes in shape.

The alterations inside the cells—characterized by impaired calcium usage and decreased energy turnover—cause the heart muscle to take longer to relax. The decrease in catecholamine in the heart, the decline in reserve blood supply to the heart, and the reduced blood oxygen content further serve to make the heart more

**Claire Stiles '56**

*"Oh, it's great!" Claire Stiles '56 says about the retirement she chose in June 1990, after thinking about it every six months for a few years. After working 28 years running a Department of Anaesthesia in a county hospital, she says "everything was getting harder and harder": no money, no equipment, but everyone expected first-class care.*

*"I miss the people," she says when asked if she has any remorse about leaving medicine. "But the problems have gotten so great, I don't miss them at all."*

*Stiles didn't really plan her retirement beforehand, but "just decided I'd let it happen and see." After working so hard for so many years, "I was just looking forward to doing nothing for a while," she says.*

*Instead of watching anesthesiology monitors, she's now watching her three young grandchildren a couple days a week, and on a recent visit, the sunsets at Santa Fe. Now that her husband, Quentin '55, has also retired, the two of them are finding that they have the freedom to do things they've never been able to do before, such as just picking up and going from their home in Palos Verdas Estates, California to New Mexico for a few days. "We're getting to know each other again after all those crazy years," she says.*

*While Quentin works with son Bradford '89 on a book on preventive medicine, Claire has been finishing projects she's been putting off for 10 years. "I always used to say 'I'll do it when I retire.' Now I'm doing them." Both Quentin and Claire also volunteer for an organization to bring better education to inner-city youth.*

*And, she says with real glee, "I now have 11 orchid plants! They're tiny, but they're there!"*

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vulnerable to stress.

The good news is that, fortunately, it is possible to at least partly reverse much of these age-related changes through exercise conditioning. For those who are not able to exercise regularly, there are drugs that may be helpful too.

In the elderly, compensatory blood pressure and heart rate response mechanisms are often delayed or insufficient. This is why fainting is common in older women and men during normal daily activities, such as arising from bed, eating or going to the toilet. This is also why modest decreases in intravascular fluid volume—such as occurs during heat prostration, viral illness, diarrhea or decreased oral fluid intake—can often result in large drops in blood pressure, which causes falls or fainting in the elderly.

Older women lose balance and fall more frequently than older men, and women are seven times more likely to sustain a hip fracture. Hip fracture is the most common diagnosis among all injuries that lead to hospitalization of elderly women—90 percent of all hip fractures occur in persons over 65. Hip fractures are also associated with long hospitalizations, high mortality (10 to 20 percent), and a very substantial likelihood (25 percent) of permanent institutionalization in a nursing home. In addition to gender, age and cardiovascular problems, other risk factors for falls include impaired mental status, muscle weakness, disturbances in balance mechanisms, use of psychoactive drugs and over-medication. Muscle strength training, even in frail, 90-year-old women and men, can result in greater mobility and improved balance as well as gait.

Currently, ongoing research has also begun to increase our understanding of osteoporosis and hip fractures in older women. Hip fractures in the elderly are a function of the mechanics of the fall, such as the direction of the fall (i.e., to the side rather than forward or backward) and the amount of soft tissue over the hip. Susan

Greenspan '79, assistant professor of medicine, has reported that bone density of the hip is an important predictor of hip fractures in older individuals. The bisphosphonates, drugs that block bone resorption, are currently being studied for their effect on skeletal integrity and alteration of fracture risk.

Recently, Wilson Hayes, MD, Maurice Edmond Mueller Professor of Biomechanics, developed a hip-padding system, which can be worn as an undergarment to protect the hip. Michael Rosenblatt '73, Ebert Professor of Molecular Medicine, is investigating ways to reduce resorption of bone at the cellular level by designing new types of molecules that would decrease the binding to bone by the cells that solubilize and reabsorb the bone matrix. The effect of hormone replacement therapy on bone resorption is also under study as part of the Women's Health Initiative.

Urinary incontinence is another common problem in older women and men. Neil Resnick, MD, assistant professor of medicine, has found that most cases of incontinence can be treated inexpensively and effectively, thereby allowing the older person to regain functional independence.

Our faculty is also deeply involved in research on the molecular biology and genetics of aging. Jan Vijg, PhD, assistant professor of medicine, has found that DNA repair in cells of patients with familial Alzheimer's disease is defective in comparison with age-matched persons who aren't afflicted. The capacity to repair DNA may be correlated with longevity. For over 100 years it was felt by some gerontologists that aging may represent the accumulation of errors in the DNA. This theory was difficult to test because of the lack of proper tools. Vijg's recent development of a genetically engineered mouse strain that carries the LacZ transgene will for the first time allow us to test the hypothesis that aging occurs partly as a result of the accumulation of DNA mutations in cells.

Ongoing breast cancer research and uterine cancer research by Sam Lee, PhD, assistant professor of medicine, include efforts to identify genes involved in metastasis, tumor suppression and cell senescence. He has also used cultured human cells to characterize the genes that are related to cell division and has found that gene expression changes during the lifespan of the cell culture. Age-related changes in normal cognitive function and oxidative damage to DNA in the brain are being studied by M. Flint Beal, MD, associate professor of neurology. The regulation of certain genes in heart cells is under study in order to understand why there is an altered program of gene expression with age.

Where should we as a nation focus our research efforts in the future? There are immediate and long-range needs that should be addressed. Our immediate needs include:

- Further research on the clinical conditions that disable elderly women and men, as well as the testing of their corresponding therapies.
- We need to invest in the infrastructure of caring for older people by training more personnel who care for them, including geriatricians.
- We also need to avoid the dehumanizing effect of "warehousing" chronically disabled elderly by designing and

## Teaching about aging

**Although the population is aging and the baby boomers are approaching their senior years, their offspring attending medical school aren't learning a comprehensive way to care for them. According to a 1987 report by the Institute of Medicine of the National Academy of Sciences, the aging population in the year 2000 will need 2,100 physicians to adequately care for them. With the way things are going now, only a few hundred will be on call.**

**HMS is working to alleviate this gap in teaching among its students through the work of Myles Sheehan, MD, instructor in medicine and member of the HMS Division on Aging. "The real problem in the medical school curriculum is finding space and time," he says. "Students and medical schools are overburdened; with microbiology, genetics and everything else, how much can you shove into a person's head?"**

**Sheehan, who is also on staff at Beth Israel Hospital, is responsible for trying to increase an understanding for older people's particular medical care needs. He is sponsored by a Brookdale fellowship, which he received in 1993 to coordinate means of introducing gerontology issues into the medical school curriculum.**

**The current curriculum includes clinical electives in geriatrics, but lacks more formal training in the basic science and medical aspects of aging. Sheehan, therefore, attempts to work within the structure of the New Pathway. "The New Pathway adapts to issues as they arise, for example ethics or HIV." Finding ways of "creative adaptation" to include aging issues is just an extension of this, he says.**

**Sheehan reviews tutorial cases and then finds age-sensitive articles to supplement the reading materials. "The point is to teach students how to be learners about aging."**

**Elders' main health problems may often be incurable, but most are manageable. "The crucial part is to deal with the patient's experience. You need to know the disease and how the disease affects the person's life." Medical students need to be particularly sensitive to an older patient's functional status and means of maintaining independence, says Sheehan. Inquiring about mental status, financial resources and general comfort is very important to the older patient.**

**For the most part, the prob-**

building better assisted living facilities, and we need to enhance functional independence and mobility through the development of better assistive devices.

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Improved physiological monitoring and early detection of dysfunction would help prevent morbidity.

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And finally, we especially need to delay the onset of cognitive impairment through earlier detection, retraining and preventive therapies.

Our long-range goals should be to decrease health-care costs not by limiting expenditure, but by developing less expensive and more effective therapies.

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We need to unravel the multifaceted process of aging by analyzing it in terms of molecular processes that interact with environmental factors.

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We need to understand how genes regulate aging and identify genes that might collectively promote longevity, as well as those that cause age-related diseases.

*The goal should be to preserve function, prevent illness and maintain independent functioning in the community as long as possible.*

•

We need to understand how the brain works and how memory fails.

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We need to understand the plasticity of living systems, the repair and regenerative processes of tissues, and the differences between reversible and irreversible change in function. We need to discover new ways to help our tissues repair themselves faster and more completely.

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We need to understand the physiology of complex systems and use this information to forecast morbid events. As a long-term strategy, it is of the utmost importance to integrate basic research with clinical practice.

In conclusion, the goal of biomedical research in aging for the benefit of old women and men should be to preserve function, prevent illness and maintain independent functioning in the community as long as possible, thereby extending the span of healthful living and reducing the costs of chronic disability and dependency. Instead of looking forward to widowhood, loneliness and poverty, America's older women should look forward to longer functional independence and greater appreciation by society in their later years.

*Jeanne Wei, MD/PhD is director of the HMS Division on Aging, associate professor of medicine and chief of the gerontology division, Beth Israel Hospital, and staff physician at Brockton/W. Roxbury V.A. Medical Center.*

**lems suffered by the aging are invisible, such as falling and urinary incontinence, conditions to which the traditional model of differential diagnosis isn't easily, or quickly, applied. Sheehan admits that this can be very frustrating for young physicians because "old people don't present as others do."**

**Sheehan tries to make medical students particularly cognizant of what is termed "reversible disease" in the elderly: "when doctors expect that certain conditions are just part of getting old, but could be because of, for example, overmedication."**

**Students have asked for more classes pertaining to geriatrics and Sheehan says the next step is to try to place more focus on elder care during the clinical years. One example is Linda Morrow, MD, instructor in medicine and member of the Division on Aging, who discusses issues relevant to elder care with her second-year students at the West Roxbury V.A. Hospital.**

**"I try to integrate concepts of gerontology and geriatric medicine into our course, which focuses on the principles of history-taking and physical examination." She admits that the exposure of individual students to geriatric medicine is variable, depending upon the instructors at each teaching site.**

**Morrow emphasizes to students that geriatric care encompasses some of the best things about primary care. "You really learn how to care for patients when you're taking care of older people," she says.**

***Terri L. Rutter***

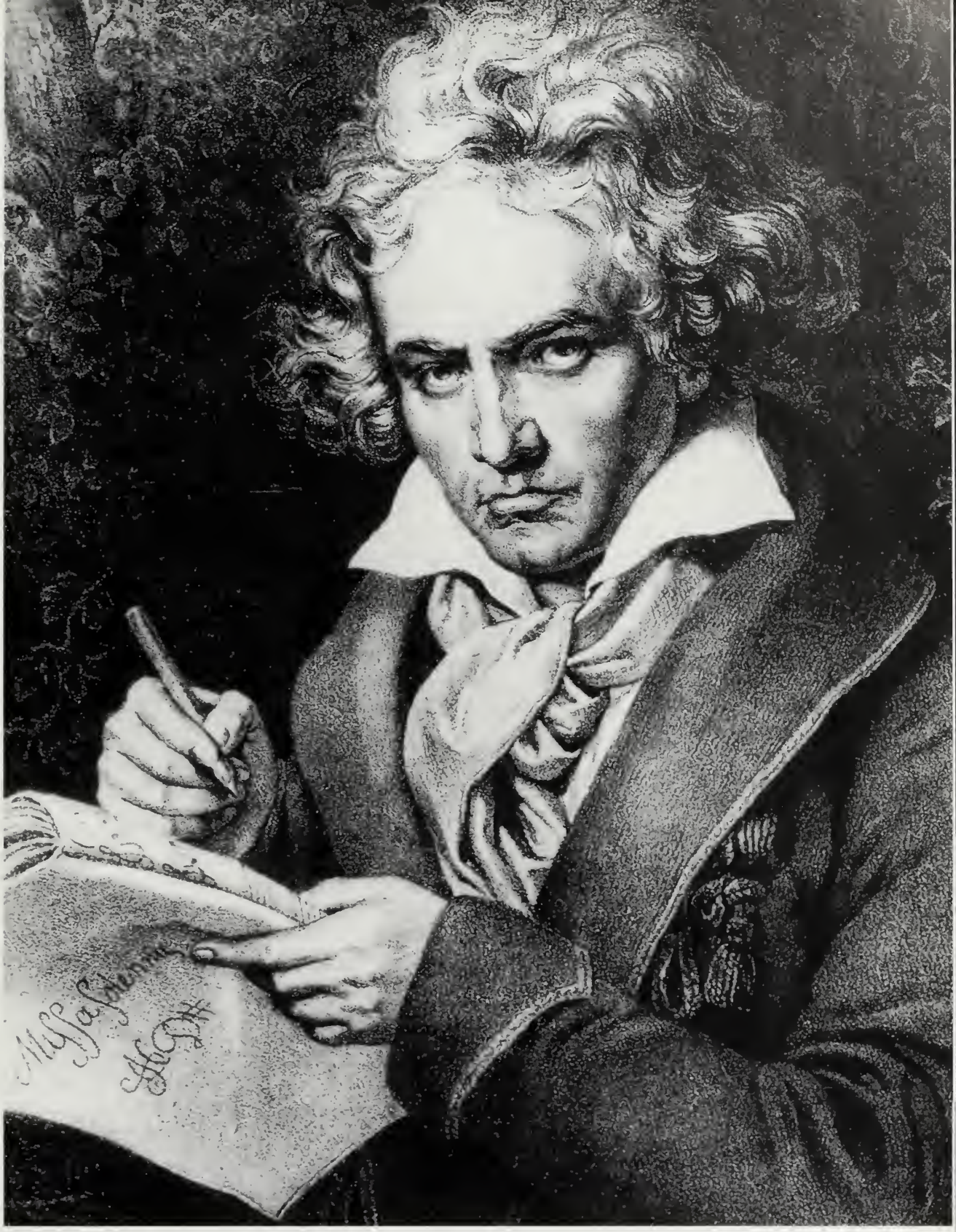

photo courtesy UPI/Bettmann

**Ludwig van Beethoven (1770-1827), despite increasing deafness, composed masterpieces throughout his life. In total deafness, he composed the Ninth Sympony, which was completed in 1823 and considered by many as the greatest symphony ever composed.**

# There's No Place Like A Nursing Home

*by John B. Stanbury*

NOT LONG AGO, WHEN RETURNING from a business trip to the deep South, I stopped over for a brief visit with an elderly aunt who has been a resident of a retirement home for many years. A lifelong invalid because of a birth defect, with deteriorating health, she has been moved progressively from relative independence until now, when she requires full dependency care in the infirmary.

I picked up a rental car at the local airport in the early evening and drove the 20 miles to the nursing home, where I was scheduled to meet my wife who had flown down from our place in New England. The lobby was empty, so I walked down the corridor to my aunt's room. There was no answer to my knock. I supposed that they had gone to dinner, so I returned to the lobby where I worked on papers for an hour or so. There was no activity of any kind. The only sounds were those of cicadas singing in the trees and some peepers in the nearby pond, and occasionally the slamming of a door or a distant muffled cry.

After a while I heard shuffling feet, a door opened, and an elderly woman in a nightdress emerged in a highly agitated state, repeatedly asking for the location of the fire. After some minutes of reassurance, she quieted down and agreed to return to her room. My wife and my aunt returned a little later.

The following morning we breakfasted in the spotless cafeteria. My aunt knew everyone in the dining room. Several came over to be introduced to these visitors from the outside. They seemed to grope, to grasp for some linkage with that world. I had the unnerving sensation of being among a group of ancient mariners, and was overwhelmed by a desperate need to be unhanded.

Later we had a tour of the institution. It is a fine complex of buildings in a pine grove, with small separate housekeeping units for those who can live independently. In the principal buildings, rooms for one or two faced the long corridors. Through opened doors we could see the elderly residents reading or knitting or just musing as they looked out the windows. Along each corridor were lounges and rooms for visitors, and occasionally an area for crafts. There was a chapel.

The infirmary was well equipped, neat, clean and staffed by nurses who were busy, friendly and from all appearances entirely competent. Most impressive was the cheerful, supportive and highly personal attention of the nursing attendants. A well qualified physician visited daily, and an arrangement with a nearby general hospital provided medical attention beyond the resources of the infirmary.

It was not possible to fault the infirmary or the care. It was the foreground that stunned. Wheelchairs stood outside the doors of many of the rooms, with the patients secured to prevent their slipping to the floor. Some gave us a beckoning smile or nod, but most sat dozing or staring vacantly or with their heads resting on their chests. There were rooms with beds occupied by those too far advanced even for the wheelchairs, who lay in bed muttering or picking at their bed clothes or groping for the sideboards or just lying mute. It was the end of the line, the depths of loneliness, the abandonment of hope.

Here was an institution that was clean, comfortable, well run, with superb medical back-up, the very best that could be hoped for, and it was shattering. Was this all that society could do?

I return almost every year. It is always the same, except my aunt has moved from relative independence to permanent residence in the infirmary as her physical health has inexorably declined. The faces change, but the scene never varies. The same wheel-

chairs are in the corridors, the same stares, the same anxious, groping smiles and greetings. On my last visit the elderly widow of a prominent ecclesiastic had the place in an uproar with her continuous stream of hostile scatological comments.

Dean K., an old friend and colleague, was a brilliant chemist who made a substantial fortune from his invention of a widely used procedure. Several years after early retirement, while driving along a turnpike, he went over the shoulder and was paraplegic for months, with a slow and partial recovery. He then developed a seizure disorder and a profound depression that required nursing home care because a physical disability made it impossible for his wife to care for him at home.

Dean's nursing home is a fine brick structure in the far suburbs, set back from the street among spruce, hemlock and flower beds. I walked along the familiar halls to the visitor's room of the infirmary, where after a time Dean appeared in his wheelchair. He gave me a big smile, and promptly lapsed into vacancy. I exhausted my store of pleasantries, sat with him for a while, and then pushed him along past the nurses' station and back and forth before leaving. The scene was indistinguishable from the infirmary where my aunt resides. The corridor was lined with the same wheelchairs, with the same patients secured from sliding, with the same silence, the same lost stares.

My four grandparents died at home, one in childbirth and the others advanced in years. None had a transfusion, intravenous fluids, antibiotics or cardiac monitoring. I recall the scene of my grandfather's last days. The bedroom in the house that he had built with his own hands in a remote Appalachian village was filled with friends and relatives, and a fire flickered in the hearth. Now and again someone would start an old familiar hymn and all would join in. There was certainty, reality and simple dignity.

At the other end of life's spectrum, at the hospital near my aunt's nursing home, there is a large and busy ward for crack children, AIDS babies, premature infants and children of alcoholic mothers, many of whom have been abandoned. The house rule is that no matter how hopeless the outlook, no medication or modality or technology is spared, irrespective of expense.

Would it not be possible to restrain the legal limits of liability so that physicians can be protected from litigation should they in their best judgment elect simply to withhold treatment? Should we not unshackle the avenging angel and the old man's friend at the ends of life's limits?

Should spending one's declining years in a nursing home be our goal that we spend our productive years providing for? Should access be a right, guaranteed by the state? Would this lead to monstrous abuses? Would this be in the best interests of society or the individual?

My aunt and Dean often intrude into my reverie. They portend the limits of my own fate, and I don't like it. Better the unexpected air crash or the asteroid strike, but most of us will not be so lucky. Most of us are destined for the terminal care unit of the nursing home, or perhaps worse, the dehumanizing and technically replete critical care unit of the hospital.

The retirement home and its infirmary and the nursing home are inevitable accompaniments of modern times, made necessary by urbanization, smaller families, crowding, value changes, growth of two-career families, and the scattering of children. These institutions are not going to go away. Indeed, they play an essential role in today's social order. There will always be the helpless and hopeless victims of catastrophic medical disasters, the demented, the survivors of massive strokes, and those with malignant tumors and advanced degenerative disease of the vascular system. They and society deserve the care that only the nursing home can provide when families cannot, but their support should best be guided by compassion and the ancient moral canons of the medical profession.

I might indulge in a few gratuitous suggestions. A first principle surely is to avoid nursing home care when and however possible and for as long as possible. Another is for realism in nursing home care. An example of unrealistic care is the demented stroke victim who is sent from the nursing home to the emergency room of the urban hospital because of a spike in temperature.

Much more might be done to give a positive dimension to the lives of those who are institutionalized with advanced disabilities. Most retirement and nursing homes have directors of activities. They are invariably overworked. More resources should be made available for this aspect of institutional life and, importantly, their goal should be developing participation as opposed to passive entertainment.

Directors of activities are expensive for institutions that are barely viable financially, yet they occupy a crucial niche in the system. Theirs is a service that should be vastly expanded and fully professionalized. Their contribution is greatest when it can be individualized. It should be directive, even when the patients initial response is to resist.

Volunteerism could become a community enterprise in these institutions, organized through churches, lodges, unions and other groups. Volunteers can provide the physical and intellectual stimulation that is impossible by a staff already overwhelmed by the necessities of routine care. Much can be done by volunteers to allay the principal and pervasive disease of the nursing home: depression and hopelessness. The wife of a colleague who lives nearby my aunt visits her every two weeks. These visits have become the central feature of my aunt's life, the source of reflection and of hope. Her future is opened in anticipation of

the next visit.

There are countless opportunities for innovative and life-affirming volunteer activities. Gardening, on even the smallest plot of the institution's backyard, can have symbolic meaning. Crafts that are more than make-work under the guidance of skilled volunteers, group or individual music—there are always some in any group who have learned music, even if long abandoned. Group performance with achievement goals can change mood and attitude.

Writing an autobiography can be a profoundly engrossing task, as well as a legacy for one's progeny. It can fill many hours. Writing skills are not required for this enterprise, but it may require much initial encouragement by a devoted and helpful volunteer.

Back to school: classroom work, well designed, led by volunteers, can be stimulating and rewarding for all, guided reading rather than listening, music appreciation, present-day novels, current events, an aspect of history, painting under instruction by a local amateur, or a thousand other programs can spark interest and penetrate the mists of introversion and depression. The list is endless.

It is a salutary exercise visiting a nursing home, not pleasant, disquieting in the extreme, perhaps frightening. But it provides a view of one of our most important and neglected corners of medical care, which is just as much an obligation of physicians as is the setting of a fracture or adjustment of the dose of insulin. The patients in nursing homes deserve far more attention from organized medicine and the investigative medical foundations than they have had in the past.

*John B. Stanbury '39 is professor emeritus of experimental medicine at MIT and HMS lecturer on medicine. He is also honorary physician at Mass. General Hospital and chairman of the International Council for the Control of Iodine Deficiency Disorders.*

**James Stillman '32**

*James Stillman '32 retired from his ob/gyn practice at Columbia Presbyterian Medical Center's Sloan Hospital for Women in 1957 and has never looked back. A man who has used this time to pursue his many interests, he says: "I've never considered myself retired. I'm working harder than when I was a doctor."*

*Stillman was thrilled to leave Westchester County behind when he retired three years shy of 60. "I never wanted to be a city doctor. I wanted to be way out on the outskirts." And so he bought 60 acres of ranch land in the town his great grandfather founded, Brownsville, Texas. There he ran a citrus farm until three years ago when 10,000 of his trees were killed by a devastating frost.*

*Stillman not only became an agricultural businessman upon retirement, he also became a politician. Shortly after leaving New York for Texas, Stillman became a Republican county chairman and worked to bring a two-party system into what was then a solely Democratic state.*

*But while he enjoyed the fireworks involved in politicking, he preferred real pyrotechnics. "Ever since I was a kid, I've always liked 4th of July more than Christmas." As a resident of Texas, which is an open fireworks state, he was in his element. What started as family celebrations with fireworks soon grew into a new vocation.*

*Stillman has been running the 4th of July fireworks display at South Padre Island, Texas for several years, among other events. Fireworks used to be lit by a torch, he explained. But now there are complicated electronic programs. "The public doesn't know all the work you put into it," he said. "It takes three to four days to set up a show, and the show only lasts about 20 minutes." Truckloads of sand have to be brought in to pack the explosive shells. Tugboats have to be rented. Stillman is not one to shy away from danger. Every 4th of July he's out on the tugboat from which the shells are sent.*

*Over the years Stillman has formed firm opinions on the matter of retirement. He feels that no one should be forced to retire at 60 since that is when many physicians are at their peak, both in terms of knowledge and experience. Using his own multi-faceted life as an example he says, "I don't think anyone should retire. You should just go on to something else."*

*Stillman is proud to report that he will turn 90 years old this year. "I wanna be hung with my boots on," he tells us, in true Texan style.*

Sarah Jane Nelson

photo courtesy UPI/Bettmann

**Comedian George Burns, age 98, blows out one of 90 candles on a cake presented to him during his birthday party in 1986 at Chasen's restaurant in Hollywood.**

# Growing Older With Hippocrates

*by Robert M. Goldwyn*

THAT I, A PLASTIC SURGEON, SHOULD be concerned about aging is not surprising since much of my professional life is spent on behalf of patients in a losing battle against the depredations of time while, of course, denying them in myself. A recent event, however, made me confront reality. A colleague, a psychiatrist, asked me in passing how I was.

"Fine," I replied.

He then took my arm, looked intently into my face and inquired further, "But are you well?"

The difference between my "fine" and his "well" I still have not fathomed. Either he knows something I don't, or I know it but have not yet admitted it. This Delphic experience, nevertheless, spurred me to take a long look in one direction and a short look in another.

To those who, for some morbid reason, may wish to recognize in themselves the syndrome of growing older (not old), I offer the following signs. The more squeamish may substitute maturing or even over-ripening (not rotting) for "growing older."

You know you are growing older:

•
when the dean or president of the university or of the United States or the local cardinal is younger than you;

*If the mighty are not remembered, what chance do you have?*

•
when you have lived through the 10th "biggest fund drive to date" of your college, medical school or hospital (or worse, when those affiliations are those of your children or grandchildren). Or when you have experienced the sixth "most thoughtful and carefully planned" curriculum change;

•
when you ask medical students and residents more questions about medical history and you become alarmed not for them but for yourself when they fail to answer correctly: e.g., a third-year Harvard medical student recently could not identify Halsted or Osler. One need not be Freud to realize that your agitation is due to your realization that if the mighty are not remembered, what chance do you have?

•
when the resident is the child of your old girlfriend or boyfriend;

•
when the operating room nurse asks you whether you "actually" saw President John F. Kennedy;

•
when you look with awe at a medical student or nurse playing the computer as Horowitz did the piano;

•
when the ward secretary calls you "Sir" and the floor nurses have adopted you as their uncle, or worse, their father;

•
when you recall almost daily that the hospital once had fewer than 10 administrators and not that many forms;

•
when you can barely understand but definitely cannot remember the content of any "basic review" article on immunology;

•
when you remember not having and therefore not losing your hospital ID card;

•
when the chief resident looks like a high school senior;

•
when the medical student laughs after you ask a question about anatomy;

•
when you have operated on three gen-


photo Alim Kocharians Courtesy *Belmont Citizen Herald*

**Leo Blacklow '30**

*"My patients were my extended family," says Leo Blacklow '30. "Mount Auburn Hospital was my second home."*

*After almost 60 years of private practice in Belmont and being on staff in the Department of Family Practice at Mount Auburn Hospital, Blacklow retired in June 1993, not because he wanted to, he says, but because a disability forced him into it. He had to begin using a cane, which impeded his physical ability to practice. In an article about him in the* Belmont Citizen Herald *he is quoted: "I never expected to retire. Retiring to me is a bittersweet thing, mostly bitter."*

*Blacklow says he still regularly attends grand rounds at Mount Auburn, and keeps up to date on medical news with his accomplished physician progeny: son Robert '59, president and dean of the Northeastern Ohio Universities College of Medicine; son Neil, professor and chairman of the Department of Medicine at University of Massachusetts Medical School; and grandson Stephen '91, MD/PhD, in the Department of Pathology at Brigham and Women's Hospital.*

*Retirement has also allowed time for him to indulge in literature. "Being a science major, I found myself very deficient in that area," he says. Now enrolled in a course at Boston College, he is reading the works of English humorist P.J. Woodhouse and the classic* Madame Bovary.

Terri L. Rutter

erations of one family;

•

when your internist was once a medical student on your service;

•

when your patients tell you that you look wonderful and then express their fears that you will be retiring;

•

when you unexpectedly encounter a colleague whom you have not seen in decades and whom you thought had gone to the happy auscultating ground;

Or when you write an article like this and enjoy reading it.

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photo courtesy UPI/Bettmann

**Boston running legend Johnny "the Elder" Kelley, age 86, finished the Boston Marathon for the 58th and last time in 1992, following a career of 114 marathons and many, many shorter races. Two-time winner of the Boston Marathon, he is most known for his seven second-place finishes, which inspired a *Boston Globe* reporter to dub the 21-mile mark on the race course "Heartbreak Hill" as the point where Kelley lost the race and had his heart broken so many times.**

# Bill W. and Dr. Bob

*excerpts from a play by Samuel Shem and Janet Surrey*

*Prologue*

*Spot up: side of stage, BILL W. July 3, 1955. Six-feet-three inches tall, lanky, with a commanding presence, Bill wears a crisp suit and tie, and speaks in a sharp, strong voice.*

BILL W.:
My name's Bill W. and I'm an alcoholic. *(Looking out over the crowd, pleased.)* At a time like this, I wish my partner could be here. As you listen to my story, you'll see how, for all those years before we met, it was like he and I were linked by an invisible thread—so that when the time came, we seemed to know each other, already. I'm talking about the man we all called—

*(SPOT up: opposite sides of stage, DR. BOB Winter, 1939. As tall as Bill, and much more chunky, DR. BOB is in a less stylish brown plaid suit, with a wild tie. He speaks in a homey, down-to-earth way. The two men overlap speeches, one taking up before the other finishes, echoing each other.)*

DR. BOB:
Dr. Bob, alcoholic. Good t'be here sober. I grew up in St. Johnsbury, Vermont, 'bout ninety miles from where Bill W. was born and raised. *(Twinkle in his eye, showing his wry sense of humor.)* Good state to come from, if y'wanna start a program for drunks, Vermont. My parents—

BILL W.:
parents divorced when I was nine, and I was left with grandfather Fayette. Gramps was always putting challenges to me, and one day he says: "Nobody but an Australian can make

## Dramatic Approaches to Addiction

**Dramatizing the devastation of alcoholism and resurrection through treatment using "live" people is so much more powerful than reading about signs and symptoms in a text. With that "show don't tell" premise in mind, the HMS Division on Addiction has collaborated with Stephen Bergman '73 and Janet Surrey, PhD to help locally stage *Bill W. and Dr. Bob*, their play about the founding of Alcoholics Anonymous.**

**The play is slated for a three-week run in June 1994 at the Majestic Theatre in downtown Boston, in partnership with Emerson College, the Massachusetts Housing Finance Agency, and Massachusetts Communities in Partnership (for substance abuse prevention).**

**There will be a special preview for Harvard medical students and faculty, with a discussion afterward, which the Division on Addiction plans as part of an innovative approach to medical education to improve ways physicians identify and treat addiction problems in patients and themselves. HMS students have also gotten involved; Lauren Solanko '94, who herself has a background in theatre arts, is coordinating the staged readings of the play with students this winter.**

**"Our interest in this play is not to support any one treatment model," says Shawn Bohen, program administrator of the Division on Addictions. "But AA is a successful model and its history is something students and faculty should know about." Steven E. Hyman '80 is the director of the division, which was created in late 1992.**

**The use of dramatics was already an educational mode the division was exploring. This academic year, with the student societies, they are planning an evening with the Improbable Players, an improvisational theatre troupe of actors/recovered addicts, who perform their personal stories.**

**The division—in an effort directed by Bertha Madras, PhD— is also collaborating with the Museum of Science to construct a federally-funded exhibit on the neurobiology of drug abuse and addiction. Part of the exhibit, to open in the spring of 1994, will be a three-character multimedia play designed to decrease the stigma and raise scientific questions related to drug abuse, addiction and depression.**

**"The biggest problem in this field is that it is stigma-**

and throw a boomerang." "Oh, yeah?" says I. "Well, I'll be the first American!" *(Delighted at the memory.)* Damn thing almost hit the old geezer in the back of the head. *(Pause.)* By the age of fifteen I'd made three vows: number one, to be Number One in anything I did—

DR. BOB:
anything I did was no use—I was forced to attend church four times a week! I vowed that "when I was free, I'd never darken the doors of a church again"—a vow I've kept, religiously, for forty-odd years—

BILL W.:
second vow was that one day I'd be accepted at the Mount Equinox Resort, where I met my wife, Lois, one of the rich summer folk from New York City—

DR. BOB:
In 1898 I left home for Dartmouth College, where I met my Annie, a Wellesley girl from Illinois. Drink soon cured my shyness, and my final—

BILL W.:
my final vow was about booze. After a—

DR. BOB:
after a whirlwind courtship lasting seventeen years, I married Annie, 'n set up my surgery in Akron, Ohio. And I said to m'wife: "all I want now, is to be normal. I want to be a normal surgeon, with a normal family, in normal Akron, Ohio. *(Pause; smiling.)* And on my tombstone I want: 'Dead, which is normal'." Y'see I'd heard—

BILL W.:
heard what booze'd done to my grandfather, seen what it'd done to my father. One thing I knew: I'd never drink. I vowed it'd never happen to me.

*(LIGHTS down. MUSIC.)*

*(But it did happen to him. Bill became an outrageous, "nose-in-the-gutter" drunk. He rose like a rocket on Wall Street, and then crashed with The Crash of '29. He was left horribly in debt, drowning his sorrows in booze. He tried everything to get sober and stay sober, and had countless hospitalizations and detoxes. Finally in early 1935 he manages to stay sober for five months, and has a chance to get his business career moving again. But then he finds himself in Akron, Ohio, alone on a Saturday night, with his business deal having just fallen through.)*

. . .

*ACT I*
*Scene 12*

*May 11, 1935. Late Saturday afternoon.*
*Lobby of the Mayflower Hotel, Akron.*

*To one side: entrance to bar, from which comes MUSIC, laughter, SOUNDS of happy drinkers.*
*To other side: propped up on a metal stand, a "Church Directory," listing names of Akron churches.*
*Downstage center: phone booth.*
*BILL W. enters in some turmoil. HE is drawn toward the bar. Stops himself, in agony, wanting a drink. Turns, walks to Church Directory, picks out name, goes to phone, calls.*
*SPOT goes up. REVEREND TUNKS answers.*

**tized," says Bohen. "An attitude shift is the biggest hurdle, which is why we are intrigued by plays as a way to get at and get through denial."**

**Addiction to alcohol, tobacco and illegal drugs is the foremost public health problem in the United States today. Alcohol abuse has been estimated to be responsible for up to 15 percent of the nation's health-care costs, according to statistics the division cites in its mission statement. Addiction destroys lives, disrupts families and is a critical factor in crime, family violence, the spread of AIDS, accidents and lost productivity.**

**The use of drama is only one of many ways the Division on Addictions has planned to chisel away at the monumental problems. With a mission "to foster education, discovery and communication in the field of substance abuse and addiction," the division has a many-pronged agenda. In terms of medical education, a task force is integrating cases and activities on substance abuse into the curriculum and hopes to better coordinate what is being taught at the different teaching sites. Included in this effort is the encouragement of self-reflection, and a separate committee, headed by Edward Hundert '84, associate dean for student affairs, is examining, with an eye to enhancing, the existing supports for students and physicians struggling with addiction.**

**"There is a gap in useful information in this field," says Hyman, director of the division. "The first step is knowledge."**

**To that end, the division's educational task force has also produced a substance abuse information card—with diagnostics on intoxication and withdrawal and local resource referral numbers—that was given to chief residents and third- and fourth-year students. These 3"x5" cards are now in a second printing. And, led by David Roberts '95 and Nick Flemming '95, 48 HMS students are writing a textbook on addiction, in which the publisher Little Brown & Co. is interested.**

**Besides education, another challenge the division is grappling with is the stigma associated with the field, which deters talented young scientists and physicians from going into it. A poster session was held in November depicting both faculty and student projects in addiction research. January 1994, the division will issue a research book on addiction activities at Harvard University.**

**"Addiction is a disease of the brain," says Hyman. "In order to understand it and**

TUNKS:
Hello?

BILL W.:
Hello, is this Reverend Walter Tunks?

TUNKS:
It is.

BILL W.:
You don't know me—my name's Bill Wilson, I'm a stockbroker from New York and I'm standing here in the lobby of the Mayflower Hotel and I ... well, I need help.

TUNKS:
How can I help?

BILL W.:
*(Desperate, speaking rapidly.)* I've been in Akron a week, working on a business deal. Yesterday the whole thing fell through and my partners went back to New York, leaving me to pick up the pieces. It's a colossal disappointment and ... well, I'm an alcoholic, and I keep being pulled like a magnet toward the bar, and if I go in there, I'm done for! I don't know anybody in Akron, I've been sober for five months today, in the Oxford Group—and I'm desperate! I need to talk to another drunk. So I went to the Church Directory and picked out your name.

TUNKS:
*(Indignantly.)* You think I'm a drunk?

BILL W.:
No, no—I thought maybe you could give me the number of another drunk?—I mean a drunk—I'm not crazy—this is humiliating!—but believe me it's a matter of life or death!

TUNKS:
No no need to feel. . .But em, uh, why not come down to our mission. Our Oxford Group meeting is tomorrow night.

BILL W.:
But I need someone now.

TUNKS:
Yes, well, em, come to the rectory. I shall be glad to pray with you.

BILL W.:
I'm sorry, Reverend, but right now I don't need prayer, I need to talk to someone, someone who can listen.

TUNKS:
But William, that's precisely what we are here for: to listen.

BILL W.:
I know, and you do it extremely well, but I need someone like me—a drinker. Can you help me?

TUNKS:
*(Muttering.)* Now I've heard everything. *(Sighing, giving in.)* Well, I suppose I can. *(Taking out notebook.)* These people may be able to help. Got a pencil? Here are their numbers.

*(BILL writes them down; MUSIC and NOISE from bar drowns them out.)*

TUNKS:
How many is that, Bill?

BILL W.:
Ten. Thanks!

TUNKS:
By the way—how did you choose to call me?

BILLW.:
Why, I don't know.

**design better treatments, we need to significantly increase the amount of basic science research going on in neurobiology."**

**There is now a continuing medical education course, run by Larry Friedman, MD, associate director of the division, and the division planning a national addiction and substance abuse conference for 1995.**

**In a federally-funded pilot project, the division has created a "community partnership" with Billerica, Massachusetts, directed by Howard Shaffer, PhD, who is director of the Zinberg Center for Addiction Studies at Cambridge Hospital. There the division will provide prevention, education and training services.**

**The division also plans to try to involve clinicians and scientists on the level of public policy development and is coordinating an interfaculty program on drug policy with the Kennedy School of Government, Harvard Law School and Harvard School of Public Health.**

**Throughout the university there's a lot going on related to substance abuse in research studies, public health and community programs, and policy decision-making. "The question then is," points out Bohen, "how do we create a structure—not a stuck one, but loose and nimble—that will organize and bring the resources needed to implement these creative ideas?"**

***Ellen Barlow***

TUNKS:
Was it because I'm Episcopal? Are you an Episcopalian?

BILL W.:
No, alcoholic. Why?

TUNKS:
I don't know how you managed to do it, but out of fifty or so names on that list, you picked the one clergyman in Akron who is active in the Oxford Group.

BILL W.:
Thanks. *(THEY bang up; SPOT out; dials the first number, no answer; second number; in SPOT, MAN answers.)* Hello, is Dennis Noble there?

MAN:
No. Who's calling.

BILL W.:
Never mind. *(Hangs up; SPOT out; dials third number; in SPOT, FRANK SULLIVAN answers.)* Hello, I'm looking for Frank Sullivan.

FRANK:
You got him.

Bill W.:
My name's Bill, I'm an alcoholic from New—*(Line goes dead; SPOT out.)* Goddammit, I'm not giving up! *(Resolutely goes through the next calls, dialing again and again—the noise drowning out the conversations, until he gets to the tenth and last name on the list. In SPOT, NORMAN SHEPARD answers.)*

BILL W.:
Norman Shepard?

NORMAN:
Yes?

BILL W.:
Norman, you don't know me, my name's Bill Wilson, I've been given your number by Revered Tunks? I'm from New York, and well, this is going to sound very strange, Norman, but I'm an alcoholic, on the wagon with the Oxford Group five months, and I'm in danger, right now, of slipping off, and that would be suicide!

NORMAN:
I'm sure it would, Bill, but how can I help.

BILLW.:
You, um … you're not a …um … a drunk yourself, are you?

NORMAN:
Sorry, no.

BILL W.:
I need another drunk to talk to. Can you put me in touch with someone?

NORMAN:
Not now—I'm just catching the Zephyr to New York, myself.

*I've been sober five months, I'm about to take that first drink, and the only thing that'll stop me is to talk to another drunk.*

*(BILL groans in disappointment.)*

NORMAN:
Did the Reverend Tunks give you other names to call?

BILL W.
He gave me ten, and you're the tenth. Aren't there any drunks in Akron?

NORMAN:
*(Realizing.)* Hey wait—you call Henrietta Sieberling. She's from the Oxford Group—for years she's been trying to help a prominent doctor in town stop drinking—Henrietta Sieberling—you call her.

BILL W.:
Sieberling? Wife of Frank?—Goodyear Rubber? I've met him—I could never call up his wife—not about this—

NORMAN:
Not his wife, his daughter-in-law. You call her. She's the one! It's Ulster 5-2265. *(With authority.)* Call her. *(Hang up; SPOT out.)*

*(Bill agonizes, then dials; SPOT up: HENRIETTA SIEBERLING, at home.)*

BILL W.:
Henrietta Sieberling?

HENRIETTA:
This is she, yes.

BILL W.:
"My name's Bill, I'm from the Oxford Group, and I'm a rum-hound from New York."

HENRIETTA:
*(Covering receiver, amazed.)* "Oh my God!—this really is manna from Heaven!"

BILL W.:
Hello? Hello? Don't hang up on me, please!

HENRIETTA:
I'm right here, Bill—go on.

BILL W.:
I've been sober five months, I'm about to take that first drink, and the only thing that'll stop me is to talk to another drunk. The Reverend Tunks put me in touch with Norman Shepard who said you know someone who might fit the bill.

HENRIETTA:
*(Every word charged with meaning.)* Yes Bill, you come right out here. I know just the man! Tell the taxi to bring you to Stan Hywet Hall—that's Welsh, for "Rock is found here"—the driver will know where it is.

BILL W.:
I'm on my way!

HENRIETTA:
Meanwhile I shall place the call to my friend!

*(Bill exits quickly.*
*LIGHTS down on hotel lobby.)*

. . .

*Scene 13*

*May 12, 1935. Sunday. The next day,*
*Mothers' Day. Five PM*
*Stan Hywet Hall, Henrietta Sieberling's house.*
*Living room.*

*BILL W. and HENRIETTA SIEBERLING greeting DR. BOB, ANNE, and SMITTY (age seventeen).*

HENRIETTA:
Bill Wilson, meet DR. Bob Smith. This is Anne, and their son, Smitty.
ANNE:
Pleased to meet y—
DR. BOB:
*(With a bad case of "the shakes," gruffly; casting a pall.)* 'fraid we can only stay about fifteen minutes. At most fifteen minutes.
BILLW.:
*(Sizing him up.)* Looks to me like you could use a drink.

*(HENRIETTA and ANNE are shocked at this.)*

DR. BOB:
*(Interested.)* Yeah, maybe I could.

*(Embarrassed pause, which HENRIETTA rushes to fill.)*

HENRIETTA:
Yes, well, grand! Now—since time is so short, why don't you men retire to the library while I make some coffee.
BILL W.
Sounds good to me. Bob?

*(BOB grunts an assent.)*
*BILL W. and DR. BOB walk to "library," where LIGHTS go up.*
*BILL sits, BOB stands.*
*LIGHTS dim on living room.)*

BILL W.:
Thanks for coming. You're probably wondering what the hell's going on, Henrietta dragging you over here to listen to me.
DR. BOB:
Accent sounds familiar—wouldn't be Vermont would it?
BILL W.:
Sure would—East Dorset—it's a small village up near Man—
DR. BOB:
Manchester. I'm St. Johnsbury, myself—quite a coincidence.
BILL W.:
Maybe. Maybe not. That's how things've been going lately, in my life. *(Pause, settling in.)* I'm a drunk, sober five months and one day, today. Last night I was knocking around the Mayflower Hotel, alone, about to take a drink. *(Takes ont pocket watch, sets it down.)* We've got twelve minutes. I'll give you the Reader's Digest version: condensed. You game?
DR. BOB:
*(Sitting.)* Fire away.
BILL W.:
My grandfather and father were drunks, so I vowed never to touch the stuff. In 1918, waiting to go off to war, I was bivouacked near Newport, Rhode Island. The wealthy families there insisted on entertaining us soldiers. "It was the first time I'd been out in society—I was so shy. I'd sit at these formal dinners, and I could hardly speak! Well, one night I was offered a Bronx cocktail, and despite everything—all the warnings, my training, my fear—my own vows—I took that first drink, and another, and then—*(Astonished.)* it was a miracle! That strange barrier between me and all men and women seemed instantly to go down—I felt like I belonged. The magic of those first drinks! I became the life of the party. I could talk—well! that first night, I got thoroughly drunk—" passed out in fact. Doc, the story that followed took me from the highest peak of the financial world right down to the gutter—I flunked out of law school, flew an airplane drunk from Albany to Manchester—lies, jail, hiding booze, stealing from my wife, hospitals, sanitariums. *(Sardonically.)* You might say that my life had become just a little unmanageable. *(THEY laugh.)* Can you imagine all that?
DR. BOB:
Don't have to—I did it. How old are ya?
BILL W.:
Thirty-nine.
DR. BOB:
I'm fifty-five. I got sixteen years on ya. Keep firin'.
BILL W.:
I ended up in Towns Hospital. My doctor, William Silkworth, told me that alcoholism is a disease, so I figure—
DR. BOB:
*(Astonished.)* A medical disease?!
BILL W.:
Yeah. *(Sensing the import to Bob.)* Silkworth says it may be inherited.
DR. BOB:
Genetically transmitted? A disease, with signs and symptoms, homeostatic dysfunction? With a course and a pro-

gression, implying a treatment? Yes. Yes!—I bet it is. Now why couldn't I see that?

BILL W.:

Most doctors can't. I figure: this is it—self-knowledge, right? Didn't work. The next piece of the puzzle is spiritual: one afternoon an old buddy, a hard drinker named Ebby Thatcher, shows up—sober—with a message from Dr. Carl Jung. Turns out Ebby'd joined the Oxford Group, and—

DR. BOB:

Amazin'! The wife 'n I've been going to Oxford Group meetin's for years! Another coincidence!

BILL W.:

Maybe. *(Pause.)* Maybe not. Ebby tells me I'm powerless over alcohol and that I have to turn my will and my life over to a power greater than myself. Now I'd gotten pretty cynical about things like that, but I tried it. I went to meetings, but I was still getting loaded. And then, one day, back in Towns Hospital, I hit rock-bottom, and … well … (*Pause.*) something else happened to me. But in the interest of time—

DR. BOB:

No, no—go on.

BILL W.:

Let's just say I had a kind of "flash," and I haven't had a drink since.

DR. BOB:

You had a "conversion" experience?

BILL W.:

*(Delighted.)* You've read William James!

DR. BOB:

Read everything I thought might help. Keep talkin'.

BILL W.:

So then what'd I do? Tried to convert all the drunks in New York! And you know how many I got? None! No one! 'Cause something's been missing. In that hotel lobby last night, I knew—Doc Silkworth, the Oxford Group, my wife, my friends, my prayers—none of 'em could help me.

DR. BOB:

Why not? I've been askin' myself that for years.

BILL W.:

*(Letting loose, fired up.)* Because they're not drunks! They don't know what it's like to wake up, your head bloody and a golf bag in your arms and a woman standing over you who maybe is your wife but maybe not and the veins in your temples pounding on bone and you don't even know what year it is, much less where you are or how you got there! They don't know what it's like, every cell in your body dry as sand, thirsting after the one thing in the world that you know will destroy you—and not being able to turn away! They don't know—you do, right?

DR. BOB:

Yes, I do.

BILL W.:

Now I don't want to get too far out here, Bob—we're both men of the world, rational men who've witnessed the birth of the great scientific events of this grand and terrible 20th century—rational, sensible, practical men—but I've got a funny feeling that we've been brought together for a reason, maybe even for a purpose. *(Intensely.)* In that hotel lobby, I knew: the only thing that could keep me sober was telling my story to another drunk. The exact words I heard were: "Bill, you need another drunk to talk to *(Pause.) just as much as he needs you.*" *(Checks watch; rises.)* Friend, I need your help.

DR. BOB:

Um. . . how can I help?

BILL W.:

I think you've just done it. Sorry, friend, I went a few minutes over. Thanks for your time.

DR. BOB:

What's yer rush? *(Begrudging.)* If it works for you, maybe it'll work for me.

BILL W.:

Maybe. I'm listening.

DR. BOB:

I dunno … what you said … with no horse manure thrown in—it's like listenin' to myself. I did all that—all of it—flunked outa med school—twice—my father the Judge comin' all the way out to Chicago with the town doctor—the two of 'em draggin me home to Vermont. … *(Ashamed.)* I chose medicine because of that old doc. He'd be the last person on earth I'd want to disappoint. I was 32 when I finally got my degree, it took me 17 years to marry Annie—my whole life's been slowed down. You've lived three lives, Bill, 'n I've barely lived one. Now I use pills and booze every day—I wake up with the jitters, take a sedative to steady my hands for surgery, start drinkin' again in the afternoon, needin' to get drunk to sleep. I'm terrified of not bein' able to sleep. Sometimes, in the operating room, I'd be high as a kite. Lucky I didn't kill somebody. *(Winking.)* 1918, eh? Prohibition was murder, wasn't it?

BILL W.:

The worst thing you can do to a drunk is pass a law to try'n stop him—he gets very serious about it then. *(They laugh.)*

DR. BOB:

Bill, I'm tryin' my best to believe, but I can't. I've sworn off God. The lid's on tight.

BILL W.:

Good.

DR. BOB:

Good?! How can that be good?

BILL W.:

Leave God out of it. I want to hear about you and booze.

DR. BOB:

*(Inching his chair closer.)* If I don't drink, I'm a monster. I need it to function, to be a doctor, husband, father. Without it, I'm so afraid, I can't function at all. Booze is the glue holding me together, the one thing I can count on. *(A cry for*

*help.)* Can you understand that? Can you, Bill?

BILL W.:

*(Connecting with him from his heart.)* My friend, I have lived it. Every day, for seventeen years.

DR. BOB:

And now the goddamn stuff doesn't work anymore—with or without it, I'm a monster.

BILL W.:

The monster is your disease.

DR. BOB:

*(A plea, a challenge.)* You really believe that, Bill?

BILL W.:

*(With great power.)* I know it.

*They don't know what it's like, every cell in your body dry as sand, thirsting after the one thing in the world that you know will destroy you.*

*(Pause. DR. BOB is overwhelmed by this, by the sense that here, at last, is another person who understands what he's gone through, from his own experience. Tears come to his eyes. HE can't speak.)*

DR. BOB:

Christ! I always figgered a drunk was a bum under a bridge, not folks like us. Here I am, a physician, a pillar of the community—I got to wishin' I could be that bum, under that bridge. But you're sayin' that what I needed all along was to come clean to one—to a hard-core, nose-in-the-gutter drunk?

BILL W.:

You found him, Bob. "Fire away."

DR. BOB:

Right. *(Moves chair even closer to Bill's.)* In 1898, I first left home for Dartmouth College. I'll never forget that feeling—finally, I was free! Drink soon cured my shyness—I had an enormous capacity for the stuff—see I always dreamed of bein' able to tap-dance, play the piano, and have curly hair—and when I was loaded, I did tap-dance, and played the piano, and hell, for all I knew, I did have curly hair, and …

*(The LIGHT has become a gold spot. The TWO MEN sit on the edges of their chairs, leaning over and in toward each other, totally absorbed in talking, and listening; attending, and responding. Their hands and faces reveal the intensity of their shared energy. The "feel" is of a tremendous sense of peace.*

*LIGHTS dim on the two.*

*Pause.*

*LIGHTS up on living room, where ANNE and HENRIETTA sit, their coffee cups empty, SMITTY asleep on the couch.)*

ANNE:

How's the time Henrietta?

HENRIETTA:

After eleven—they've been in there six hours!

ANNE:

Smitty has school tomorrow. We must go. C'mon, Smitty, get up.

HENRIETTA:

*(Calling to the "library.")* Bill? Bob? I'm afraid you'll have to adjourn.

*(LIGHTS up: BILL W. and DR. BOB sit, talking. LIGHT has changed—brighter, crisper—the "feel" is of fresh, new energy, unleashed, filling the words and actions of both men.)*

DR. BOB:

*(Calling.)* Be right there. *(To Bill, excitedly, with real zest—a changed man.)* But we've had people tryin' to tell us what's wrong with us all our lives—it just gets our backs up, makes us dig in our heels—y'can't fix us, telling stories.

BILL W.

*(Revved up.)* But telling our own stories—to each other—making a simple, honest statement of who we are and what happened to us, well, that's real, 'n has a ring of truth to it—like when a coin falls on a table, faster 'n faster, giving off that ringing sound, y'know?—and when we're telling it, some quality of that truth makes its way across the gap between one drunk and another—like sound waves, or light rays—and maybe, when nobody's lookin', it slips in under the ribs and hits the other fella's heart?—it's a mystery, how it works, but it does work!

DR. BOB:

You're gettin' kinda complicated about it, Bill, I mean, you're puttin' in a lotta fireworks and miracles, and—

HENRIETTA:

*(Calling.)* Bill! Bob! It's very late. Anne needs to go!

BILL W.:

*(Calling.)* Be right there! *(In awe of the magnitude of the "discovery.")* Listen!—I can see the shape of the whole thing, emerging! All I've got to do is whittle it down! This could be one of the greatest discoveries of the century!

DR. BOB:

*(Sensing the import, giving full weight to the words.)* Well, if this treatment works, we've got no choice but to take it to others. And working on others might just keep us sober, as well.

BILL W.:

*(Startled, realizing that Bob has just joined in with him.)* Together? *(Bob nods.)* Don't worry—I'll go easy on the fireworks—hell, maybe the main thing about that flash of mine was just to move me along to the next stop—this meeting with you—if there is any miracle, partner, this is it!

DR. BOB:
*(Embarrassed; rising.)* Yeah, well, I dunno about things like that. *(Twinkle in his eye.)* But it looks like it isn't God after all. It's just God workin' through other drunks.

BILL W.:
We'll save hundreds, thousands, millions.

DR. BOB:
Let's just get one more. C'mon, let's face the music. *(THEY exit.)*

*(LIGHTS down on library.*
*Pause.*
*The TWO MEN enter the living room.*
*DR. BOB. seems transformed: no "shakes," no hunched back, etc.)*

ANNE:
*(Noticing, surprised.)* Well then, Bob!

SMITTY:
*(Fractious.)* Mom!—let's go home! I'm tired of waitin' for him!

ANNE:
*(Calmly, sensing something has changed.)* We all are, Smitty, but I have a feeling we're ready now. When are you going back to New York City, Bill?

DR. BOB:
He's staying in Akron awhile, Annie. You wouldn't mind if he moves in with us? *(Anne, startled look.)* Didn't think you would mind somehow.

HENRIETTA:
*(Curious.)* Quite a long meeting you two had.

BILL W.:
Takes a while Henrietta, to draw up a plan to save ourselves—and, while we were at it, the rest of the world, too.

HENRIETTA:
Is that what you were up to?

DR. BOB:
So long, Bill, and thanks.

BILL W.:
Thank you. See you tomorrow. I'm ready to start!

DR. BOB:
*(Putting his arm around Smitty.)* C'mon son, let's go home.

HENRIETTA:
Quite a coincidence, isn't it, Bob.

DR. BOB:
"Maybe. Maybe not." *(Pause; warmly.)* Henrietta, goodnight.

*(THEY walk out as LIGHT fades. MUSIC.)*

*(Bill and Bob do succeed in keeping each other sober, and try to find "one more." After several failures, they finally succeed in getting "the third alcoholic," a man they visit in his hospital room, named "Billy D." It's clear that "The Program" has begun.)*

. . .

*EPILOGUE*

*As in the Prologne, on opposite sides of the stage, in spots:*
*BILL W. July 3, 1955: twenty years later, to the day. BILL is facing a huge crowd in St. Louis Convention Center, the keynote speaker at the 20th Anniversary Convention of the founding of Alcoholics Anonymous.*
*DR. BOB. 1939, a cold winter night. In the damp, chilly basement of the King's School in Akron, BOB is "telling his story" to a group of about twenty, at the regular Wednesday night meeting of Alcoholics Anonymous.*

BILL W.:
—and so, twenty years ago, DR. BOB and I walked out of Billy D.'s room and one of us turned to the other and said: "Now we've got three members, that makes us a group." Billy D. left that hospital a free man—he never again found it necessary to take a drink. DR. Bob's last drink and drug was the beer and goofball I put in him for that operation, June 10th. I myself have not found it necessary to take a drink since I went into Towns Hospital that last time. DR. BOB was always the steady hand on the wheel, steadying me when I got too big for my britches—which, as you oldtimers out there may remember, was pretty often, early on. And now, from this beautiful convention center in St. Louis, we thousands can look back to the summer twenty years ago in Akron, when we three went out looking for just one more to pass it on—

DR. BOB:
—we three went out lookin' for just one more, to pass it on. Over four years ago now! Brr! These Akron basements are cold! 'n so, from my story tonight, you can see how me'n my partner, that fireball drunk from New York City named BILL W., came up with the first few steps of our Program: "Step 1: We admitted we were powerless over alcohol—that our lives had become unmanageable; Step 2: Came to believe that a Power greater than ourselves could restore us to sanity; Step 3: Made a decision to turn our will and our lives over to the care of God—*(Pause; pointedly, with a twinkle in his eye.)*—as we understand Him." And the tomatoes? Well, we agreed not to carve out a special—

BILL W.:—special step just for them. I could tell so many stories! From that first group of three members, we've grown to ... *(Consulting a card.)* 5,927 groups, 131,619 members. Roughly. DR. BOB and Sister Ignatia, in the alcohol ward they founded at St. Thomas Hospital in Akron, worked with more than five thousand drunks. And Bob never took a penny for his work. Lois and Anne took their concern and experience and worked with Al Anon family groups—a story in itself. I could tell of our cutting loose from the Oxford Group, or the continuing support of Henrietta Sieberling, or of my friend and sponsor Ebby T., who finally joined us. And I could tell of our foundation in anonymity, "ever reminding us to place principles before personalities." But I'm running out of time and so—

DR. BOB:
I'm running out of time, and so I'll stop. If any of you out there can identify with any of this, well, it's a rare moment, and we welcome you. For you newcomers, I've got a few suggestions: take the cotton outa your ears, and put it in your mouth—just sit, and listen; to stay sober, a day at a time, do what all the rest of us do: just don't drink, ask for help, 'n go to meetin's. (*Pause.*) Y'know, every time I'm at a meetin', I'm brought back to that first meetin'; when Bill W. came into my life. Bill's a man I came to think of as a brother, and strange, but all evenin' long he's been very much on my mind. And I reckon that for each of you it's the same—drawin' us together, through that invisible thread that connects us all. *(Pause.)* Like to end our meetin' with a moment of silence. *(HE bows his head.)*

*If any of you out there can identify with any of this, well, it's a rare moment, and we welcome you.*

BILL W.:
"Let me close with a word about DR. Bob. One Sunday in November, 1950, I traveled once again to Akron, to that house on Ardmore Avenue, to ask for Bob's advice. I wanted the two of us to step down, and turn over the governing of the whole fellowship to its members. Bob was in terrible shape, deathly ill, but after careful thought he said: 'Well, Sir William, it has to be AA's decision, not yours and mine. Let's call that conference. It's fine with me.' *(Pause.)* A few hours later I took my leave of DR. Bob, knowing that the following week he was to undergo a very serious operation. Neither of us dared say what was in our hearts. We both knew that this might well be the last decision that we would make together. I went down the steps and then turned to look back. Bob stood in the doorway, tall and upright as ever. Some color'd come back into his cheeks, he was carefully dressed in a light gray suit. This was my partner, the man with whom I never had a hard word. And then that wonderful smile lit up his face, and he said almost jokingly: *(Pause, on the verge of tears.)* 'Remember, Bill, let's not louse this thing up. Let's keep it simple!' *(Pause.)* I turned away, unable to say a word. That was the last time I ever saw him." Like to end our meetin' with a moment of silence. *(HE bows his head.)*

*(In synchrony, SPOTS on both men fade. MUSIC.)*

*Sam Shem, MD, PhD (the pen name for Stephen Bergman '73) is a playwright, novelist and psychiatrist. His novels include* The House of God *(Dell, 1978) about medical internship, and its upcoming sequel,* Mount Misery *(Crown, 1994), and* Fine *(Dell, 1985). His plays include* Room For One Woman *and* Napoleon's Dinner *(both published in* The Best Short Plays *anthologies). He is a psychiatrist at Harvard Medical School, chairman of the Committee on Clinical Projects at the HMS Division on Addictions, and is an affiliated scholar with the Stone Center, Wellesley College.*

*Janet Surrey, PhD is an HMS clinical instructor in psychology, senior consultant for the Women's Treatment Network at McLean Hospital, and research associate at the Stone Center, Wellesley College. She is co-author of* Women's Growth in Connection *(Guildford, 1991) and co-author of the upcoming* Something Might Happen!—When Women and Men Get Together *(Basic Books, 1994). Drs. Bergman and Surrey are married and the parents of a two-year-old girl.*

*S. Burt Wolbach and Sidney Farber*

# Two Late Great Pathologists

*by Jonathan Cohen*

WERE A HISTORIAN TO DISCOUNT AS unreliable (compared to written accounts) the reminiscences of elderly, albeit privileged, observers, a biographer would miss some of the personal items of interest that I intend to set down in this brief memoir. I have no doubt that, in time, both of my subjects, S. Burt Wolbach '03 and Sidney Farber '27, will be attractive to biographers for their respective contributions to medicine and for the illumination their lives can provide on a golden age of medical research.

In late 1945, after I returned from World War II, Wolbach appointed me to a position in the Pathology Department of Harvard Medical School and Children's Hospital. I was to train under Farber and my appointment over the years progressed from voluntary graduate assistant to assistant professor. For eight years, I was Wolbach's personal assistant from just prior to his becoming emeritus to his death in 1954, and during our daily contact he told me much of what follows. My contacts with Farber, from 1945 until his death in 1973, initially were also frequent and personal during my residency and then my many years at the Jimmy Fund.

It would be hard to find two more dissimilar men. Wolbach—born in Nebraska, in Wild West days, of patrician, wealthy parents—was short, trim, somewhat cold and sparing of speech. He became my ideal as a scientist. Farber, of East Coast origin, was tall and portly, warm and political. He is remembered for his advocacy, not only of me but also of nearly anyone who worked for him in any capacity. Farber's overriding concern was the common good—a purpose in life that was completely foreign to Wolbach.

Wolbach is well known for his role in identifying the agent that causes Rocky Mountain spotted fever and for his discovery of the manner of transmission of typhus fever. His investigation of the Rocky Mountain patients took him to areas that at the time (circa 1910) were meager with respect to facilities for bacteriological and histological work. Wolbach was then a professor of bacteriology as well as pathology at Harvard. He could not rely on local facilities for culturing organisms or preparing slides, and he was too impatient to wait for results prepared from material sent east. He told me that he refined his technique (used for frozen sections) of free-hand sectioning with a razor (the kind you strop), and stained the sections with stains that he had brought along, anticipating the difficulties.

The problems of culturing and identifying rickettsia are well known, even now. In Wolbach's day, it must have been his sensitivity in observation of bacterial morphology in tissues that led to identification of the rickettsia. The same observational talent, this time for gross deviations from the normal in animals (the spine and CNS of rats), led him to the discovery that the neurological lesions in Vitamin A-deficient rats depended on retardation of skeletal growth and not on any direct relationship between the vitamin and the CNS.

One anecdote will suffice to show again his observational talent, but also a character trait. On his way to Poland to study typhus fever, he stopped at

the London School of Tropical Medicine for supplies. While there, he told me, he was asked to look over some slides to be exhibited to the press the next day by Sir Patrick Manson, MD, who thought they showed the organisms responsible for Hodgkin's disease.

Wolbach looked at the slides and then asked about whether the "organisms" were cultured. When answered in the negative, he asked what tissue they came from. "Lymph nodes by aspiration," was the answer, whereupon Wolbach said that he'd seen the same basophilic bodies in aspirates from lymph nodes from patients with sleeping sickness, and thought they represented fragments of lymphocytic nuclei. Needless to say, the press conference was called off.

In my view, Wolbach's supreme achievement as a scientist was his perception that scurvy, as manifested in the connective tissues, represented a failure of polymerization of the building blocks of collagen—this conclusion made at the time when polymer chemistry was unknown. He got the idea because his guinea pigs, who were rendered scorbutic and given ascorbic acid, within a few hours showed marked production of collagen—too quickly, he thought, for synthesis of collagen de novo.

While the above achievements occurred long before I knew him, Wolbach's scientific acumen and wide-ranging approach to any scientific investigation were every bit as sharp when he was in his 60s and 70s as when he was younger. His habit of repeating every experiment at least twice and waiting until he had confirmed his own results before presenting them publicly were among his rules of the game—obviously uncomfortable restraints on his workers, which now would be considered anachronisms. To me they are an essential facet of scientific endeavor.

Sidney Farber, in great contrast, was not an experimental pathologist. Nevertheless, his achievements in pathology were also based on thoroughness and perceptive observations. Two examples, both of which occurred during my service in his department, will make the point. Every postmortem dissection done in his department when he was chief ordinarily took about four hours. Each elicited at least 30 blocks of tissue for sectioning, and perhaps a few slides per block. The write-ups were correspondingly long and tedious. But out of that material, which he checked personally, he made crucial observations.

For instance, in the newborns who died of meconium ileus, he saw plugs of mucus in many exocrine glands, and he also found them in the infants and children who died of pancreatic fibrosis. He called the phenomenon mucoviscidosis, because he reasoned that the mucus was too viscid. He assigned Harry Schwachman, MD, a pediatrician who had an appointment in pathology, to the job of detecting whether an enzyme was missing or in short supply. Surely that was a seminal concept in the development of our understanding of cystic fibrosis.

A second observation of Farber's has had even greater influence on medicine—one that justifies calling Farber the father of cancer chemotherapy.

Wolbach, Farber's boss both at Harvard and at Children's Hospital,

**S. Burt Wolbach**

photo courtesy Rare Books, Countway Library

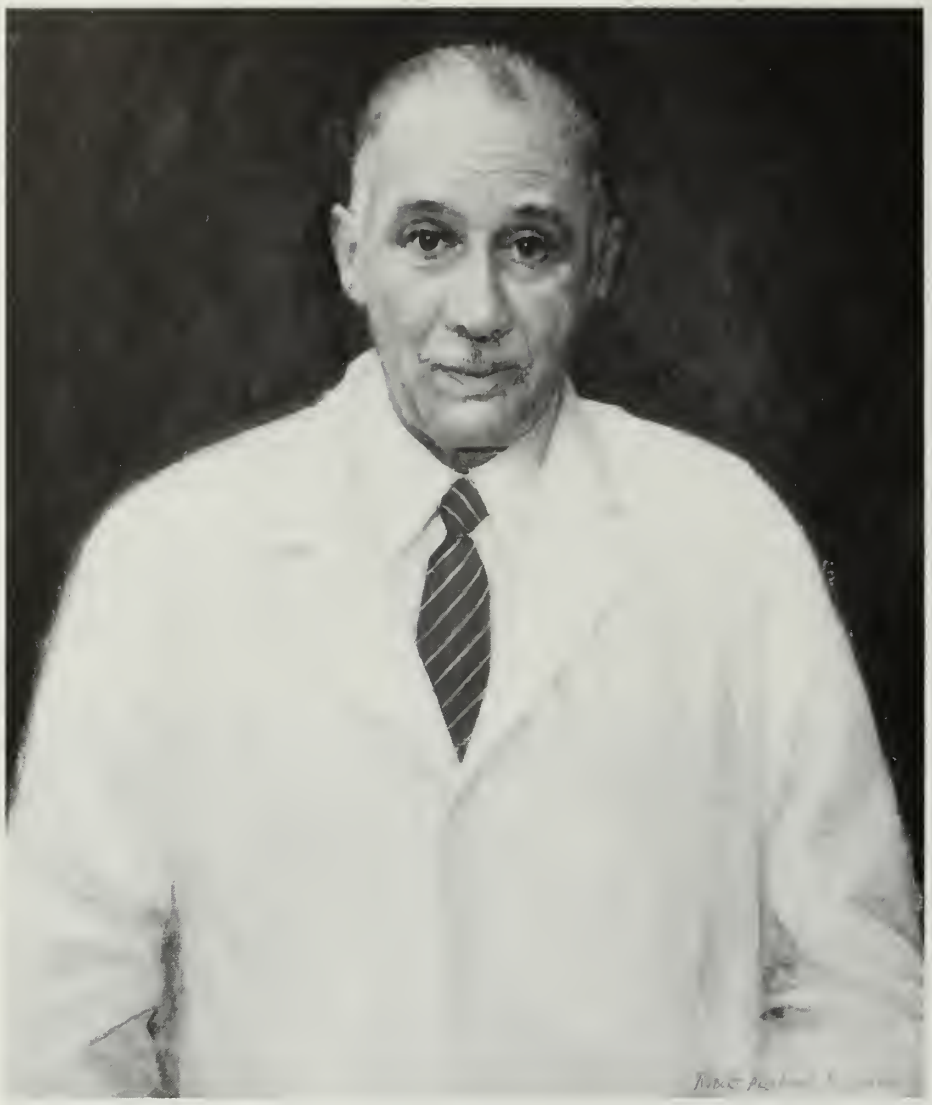

photo courtesy Dana-Farber Cancer Institute

**Sidney Farber**

was asked by a pharmaceutical company to review some slides from animals used to test a drug being targeted for treatment of anemia. He assigned the review to Farber, who wrote to the company that the drug aminopterin did not stimulate erythropoiesis, but rather seemed to depress leucopoiesis unduly and perhaps selectively. He suggested that it might be tried as a treatment for diseases characterized by excessive leucopoiesis, such as leukemia.

The company then asked if Farber would be willing to participate in a testing program for the drug, and its congeners. Farber consulted Louis K. Diamond, MD, then head of pediatric hematology at the hospital, who declined to handle the clinical testing, being fully committed to investigations of Rh and hemophilia. Farber was allowed then to go it alone, and he developed the world-famous institutions now operating as the Jimmy Fund and the Dana-Farber Cancer Institute.

To the end of his life, Farber supervised and participated actively in the clinical and laboratory programs of these institutions. Undoubtedly their success, from the organizational point of view, was due in large part to Farber's political skills, for it was he and Jonathan Rhoades, MD of the Memorial Hospital in New York who were responsible for the birth of the National Cancer Institute and less specifically, for the experimental programs of the National Institutes of Health.

One other anecdote reveals an important character trait of Farber's. In his laboratory—peopled always with more individuals training in pediatrics, surgery, etc., than in pathology—one fellow studying hematology was about to return to his home and practice in New York City. Farber, suggesting he needed a few more months in the laboratory, told him to go to a specific hospital laboratory where a position was being held for him. Off he went, and six months later, when Farber was in New York, he sought out the researcher and told him that he had arranged another appointment, this time as a hematologist in Detriot. I later learned that Farber kept track of all those who had worked in his department and, by reason of his relationships with the National Institutes of Health and the importance of their financial support of research, promoted their careers, quite without their knowledge.

Growing up medically with mentors like Wolbach and Farber, in the heady atmosphere of post World War II, was a unique experience. As one's associates, mostly veterans, returned with pent-up ambition and drive, financed by a government with idealistic aims and a buoyant economy, it was possible to rub shoulders with a sprinkling of Nobel Prize winners as well as with such men as Wolbach and Farber. All of this formed the matrix out of which grew the present American predominance in medicine.

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